PUBLIC

OFFICE OF CONSUMER ADVOCATE

DIRECT TESTIMONY

OF

MARCOS MUNOZ

IN RE: LIBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP. d/b/a LIBERTY UTILITIES DOCKET NO. RPU-2016-0003

November 7, 2016

NOTE: Confidential material has been identified by placing it between curly brackets { }.

Q: What is your name and business address?

A: My name is Marcos Munoz. My business address is 1375 East Court Avenue, Des Moines, Iowa 50319-0063.

Q: By whom are you employed?

A: I am employed by the Office of Consumer Advocate (OCA) of the Iowa Department of Justice as a Utility Analyst.

Q: Please describe your educational background.

A: I received Bachelor's and Master's degrees in Economics from New Mexico State University in 2007 and 2010 respectively. My Master's degree focused on Public Utility Regulation and emphasized National Association of Regulatory Utility Commissioners (NARUC) ratemaking techniques in the application and simulation of revenue requirement and cost of service studies. In addition to my academic training in utility regulation, I hold the professional designation of Certified Rate of Return Analyst (CRRA) awarded by the Society of Utility and Regulatory Financial Analysts (SURFA).

My academic experience includes applied econometric analysis in financial and cost economics. I performed research regarding the financial consequences of utility restructuring and its risks, specifically the implications of removing ring-fencing mechanisms that pertain to the repeal of the Public Utility Holding Company Act (PUHCA). I also performed research regarding return expectations and the effects of public expenditure programs in the reduction of market volatility.

Q: Please describe your professional background.

A: Prior to joining the OCA in June 2010, I worked for a financial and research firm. While in college, I had the opportunity to participate in the formulation of a feasibility study for the development of a wind farm facility intended to provide distributed generation to the border states of Chihuahua, Mexico and New Mexico. I primarily concentrated on analyzing the social and political regulatory environment in Mexico. I also assisted in designing finance strategies for the promotion of wind energy in developing countries through a Kyoto protocol program called, "Clean Development Mechanisms."

Since joining the OCA, I have concentrated on equity return research and assisting other staff in the development and implementation of cost of equity and cost of capital valuation models. I have analyzed avoided cost studies, O&M calculations, demand projections, and fuel cost projections. I have also been responsible for analyzing transmission costs and planning, general class cost of service issues, and interconnection tariff revisions. I have also reviewed purchased gas adjustment filings and natural gas hedging plans.

In addition to my employment at OCA, I have taught economics, international business, and statistics at Grandview University and Des Moines

Area Community College in Des Moines.

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to recommend an appropriate rate of return on common equity (ROE), capital structure, and weighted average cost of capital (WACC) for Liberty Utilities (Midstates Natural Gas) Corp. d/b/a/ Liberty Utilities (Liberty). Lastly, I respond to Liberty's witness Mr. Keith Magee regarding his testimonies about these financial issues.

Q: Have you prepared an exhibit or schedules?

A: Yes. I prepared Schedules A through F, which are attached to this testimony.

Summary of Recommendations

Q: Would you please summarize your recommendations?

A: Yes. As shown in my Schedule A, I recommend an ROE of 9.2% and a capital structure that consists of 53% long-term debt and 47% common equity. The resulting WACC is 6.884%.

Return on Common Equity Capital

Q: What is the cost of common equity capital, and why is it important in the regulatory process?

A: The cost of equity capital is an investor's expected return on his or her equity investment in a regulated public utility. Regulation provides public utilities with the opportunity to recover their reasonably incurred costs including a reasonable return on its investment. A reasonable rate of return allowed on an equity investment should be equal to the cost of the equity capital.

Rates that are set to generate a return on common equity exceeding the utility's cost of common equity capital are unreasonable and will result in windfall profits paid by the ratepayers to the regulated public utility. The opposite is true if the allowed return on common equity capital is below the cost of the equity capital investment. If the allowed return is less than the utility's cost of capital, a regulated public utility will realize challenges in acquiring equity capital to meet its service obligation.

Q: Can you describe the principles used to estimate the cost of common equity?

A: Yes. Under the rate making process, a regulated utility is allowed the opportunity to earn a fair and reasonable rate of return on its investment used to provide safe and reliable service. The Iowa Utilities Board (IUB) establishes a fair and reasonable rate of return by considering, among other things, the reasonable and comparable cost of equity of similar-risk companies, the sufficiency of the rate of return to preserve a company's financial integrity, and the ability of the rate of return to sustain capital attraction in the future.

Q: Can one estimate the cost of equity with the same precision used in

determining the cost of debt?

A: No. The cost of debt is precisely measurable by analyzing interest payments, maturities, and issue prices. The cost of equity takes into account subjective parameters such as relative risks and investor expectations. My analysis uses a group of proxy utility companies to estimate Liberty's cost of common equity using the continuous compounding form of the Discounted Cash Flow (DCF) Model. I also used the Capital Asset Pricing Model (CAPM) to check my DCF results.

The Proxy Group

Q: How did you select the sample of natural gas utilities used to determine an estimate of the cost of common equity?

A: I began my analysis by looking at companies in the Natural Gas Utility industry Survey as provided by *Value Line*. In my opinion, the broad measures of business and financial risk of these companies are representative of Liberty.

Q: Which natural gas utilities did you select?

A: I selected seven companies contained in the 2016 third quarter edition of *Value Line's* Natural Gas Utility industry survey. These companies are Atmos Energy, Spire Inc., New Jersey Resources Corporation, Northwest Natural Gas Company, South Jersey Industries, Inc., Southwest Gas, and WGL Holdings, Inc. Both Mr. Magee and I agree that these companies have investment risks similar to the risks realized by Liberty.

The DCF Model

Q: What is the economic foundation for using the DCF Model?

A: The price an investor is willing to pay for an investment under any market condition depends on, and is equal to, the present value of the expected future income stream the investment generates. The DCF Model accurately reflects price based upon the present value of expected future income streams. The future income stream may take the form of cash dividends or capital gains. The combination of current and future income streams is what the investor relies upon in determining the investor's expected return on investment. Thus, in the DCF Model, the discount rate measures the expected market return on an equity investment and reflects the cost of the equity investment.

Q: Why should we use the DCF Model to estimate the cost of common equity?

A: Investors use the DCF Model as a tool to calculate expected returns on common equity and assist in financial decision-making. The DCF Model considers market prices that reflect the most current information. Investors rely on the same market information incorporated in the DCF Model to determine the discount rate they expect to apply to their equity investments.

Q: Are capital markets efficient?

A: Yes. Capital markets, such as the New York Stock Exchange, are efficient as a result of participant competition and the free flow of information. When information becomes available, competition between participants will drive the price of an investment to the point where investors have the opportunity to earn their cost of common equity, but no more.

Q: Would you explain how the DCF Model works?

A: Yes. The DCF Model considers the cash flows that investors expect to receive. The cost of common equity, expressed as K, is equal to D/P + G, where D is the dividend, P is the price of the investment, and G is the expected growth rate.

Q: Does the DCF analysis take into account other investment opportunities?

A: Yes. Investor interaction in capital markets drives prices that the DCF Model incorporates. The markets and prices should reflect all of the investors' opportunities.

Q: Please explain why it is appropriate to rely on the continuous compounding DCF Model in estimating a utility's cost of common equity.

A: Continuous compounding is widely used as a measure to understand the time value of a long-term holding period investment such as debt and/or equity. As opposed to the discrete DCF Model (which incorrectly assumes that a company accrues revenues and compounds dividends in discrete quarterly intervals), the continuous compounding DCF Model assumes that companies actually earn, accrue, and receive revenues continuously throughout the year on a daily or continuous basis (not just quarterly basis). This continuous stream of revenues compounds over time, and utilities pay shareholders the compounded earnings through dividends.

Q: What market prices did you use in your DCF calculations?

A: As shown in my Schedule C, page 1, col. (c), I calculated an average weekly price for the twelve-month period ending July 25, 2016, for each company included in my proxy group and used this price in my DCF calculation. An average price over this recent 12-month period is more likely to be representative and conform to current market conditions than a single price in time or a monthly average price, and short-term market aberrations are less likely to influence average prices.

Q: What dividend did you use in your DCF analysis to calculate the cost of common equity for Liberty?

A: I used the indicated dividend for each of the companies in my proxy group. The indicated dividend is the most recently declared quarterly dividend annualized (or multiplied by four). The indicated dividend reflects the fact that firms generally pay dividends four times per year. Thus, the indicated dividend is the best information available to investors for estimating the expected future annual dividends. My Schedule C, page 1, col. (d), shows the average indicated dividend for each company included in my proxy group.

Q: Why is the indicated dividend the best measure available to determine the expected dividend?

A: The indicated dividend measures investors' expected dividend payment based upon the following four assumptions:

(1) indicated dividends reflect the most recently declared quarterly dividend annualized as though the same amount was paid each quarter for the entire year,

(2) firms are not required to increase their dividends,

(3) dividends are normally increased if the firm believes the increase is sustainable in the future, and

(4) dividends are not lowered in low-earning periods (unless the lowered earnings are expected to continue).

As a result, the indicated dividend is the most recent and most accurate indicator available to investors regarding a firm's prospective annual dividend payments.

Q: Did Liberty witness Mr. Magee also rely on the indicated dividend?

A: No. In contrast to my dividend recommendation, Mr. Magee relied upon a speculative projected dividend rather than actual achieved dividends. Mr. Magee assumes that each company in his proxy group will be increasing its yearly dividend consistently during future periods.

Q: Is Mr. Magee's assumption that dividends will consistently increase reasonable?

A: No. This assumption is not likely to be accurate because dividend forecasts tend to be overly optimistic and because dividend payments are a function of earnings and the companies' dividend payout policies. There is no guarantee that the proxy companies will, in fact, constantly increase their dividend payouts, and Mr. Magee has not provided any evidence that support his contention that they will.

Q: How did you calculate the dividend yield?

A: I calculated the dividend yield by dividing the indicated annual dividend by the average 52-week closing stock prices between August 2015 and July 2016. I show my dividend yield calculations in my Schedule C, page 1, column (e).

Q: What are the characteristics of the appropriate growth rate to incorporate into the DCF Model?

A: The DCF Model should incorporate long-term and sustainable growth rates expected over the life of the investment. In steady state equilibrium, the perpetual sustainable growth in earnings per share (EPS), dividend per share (DPS), and book value per share (BVPS) will equal the internal growth rate (br). On the other hand, businesses operate under changing economic and market circumstances, not in perpetual steady state equilibrium. Thus, in the immediate term, the growth in EPS, DPS, BVPS, and the internal growth (br) rate will not be the same. As a result, one has to determine the measures of dividend growth that are most representative of the long–run sustainable future given the performance of the company in the particular period being evaluated.

Q: Did you rely on EPS as your sole basis for determining a sustainable growth rate?

A: No. Focusing solely on EPS to determine growth rates can lead to unsustainable results. Cyclical market conditions influence EPS. Market cyclicality can cause EPS to drastically change over time and affect EPS growth trends.

Q: Please describe how you determined the growth rate you incorporated in your DCF Model to determine Liberty's current cost of equity.

A: I determined the long-run sustainable growth rate for each company in my proxy group by examining each company's historical financial performance, the factors that influenced that performance, and the factors that could and/or would affect each company's future performance. I examined each company's historical EPS, BVPS, and DPS set forth in each company's *Value Line* survey. I then used this information to compute the historical internal growth rate in order to determine reasonable measurements of sustainable growth.

Q: How did you determine the expected sustainable growth rates for EPS, BVPS, and DPS?

A: I relied on the 5-year and 10-year historical EPS, BVPS, and DPS growth rates published by *Value Line* for each company included in my proxy group. OCA Exhibit Munoz Direct Schedule C, page 2 shows the historical financial information for EPS, BVPS, and DPS.

Q: How did you estimate the internal growth rate?

A: I estimated the internal growth rate (br) by looking at the historical payout policy of each of the utilities in the proxy group. The percentage difference between the historical dividend payments and earnings is known as the payout ratio *(1-b),* where 1 represents 100% of earnings paid and *(b)* is the ratio of dividends retained by the company (also known as the retention ratio). Since there are no accurate measures for either a company's future dividend-payout policy or its retention ratio *(b)*, I relied on the historical five- and ten-year measures of the retention ratio *(b)* as a reasonable estimate. Next, I multiplied the retention ratio *(b)* for each of the past ten years by the historical achieved return on book equity (*r*) to arrive at the five- and ten-year internal growth rate (br) for each company.

After computing the internal growth rate, I considered the impact of an external financing (S x V) factor on each company's internal growth rate. I calculated the external financing impact by adjusting the historical changes in share issuance and multiplying the percentage change in shares by each year's market-to-book ratio. The resulting internal growth rate for each company (br) is shown in my Schedule C, pages 3 through 9.

Q: How did you determine the appropriate long-run sustainable growth rate?

A: I relied on the median growth rate for each company derived from all the measures of historical growth (EPS, BVPS, DPS, and internal growth) as the appropriate measure of central tendency as shown in my Schedule C.

Q: Does a firm's historical performance provide data to better estimate a sustainable growth rate than analyst growth rate forecasts?

A: Yes. Analysts tend to overstate growth rate forecasts, because analysts tend to be overly optimistic with their EPS and DPS growth forecasts. In addition, forecasts of DPS and EPS growth rates focus on short-term projections. Short-term growth rate projections do not accurately reflect the DCF Model's assumed perpetual holding period of an equity investment. Moreover, the assumptions and data used in short-term growth forecasts are rarely available for public consumption. This means that the public has to rely on the analysts' EPS forecast information without being able to determine if the assumptions, data, or analysis relied upon to generate these forecasts are accurate.

Q: Did Mr. Magee rely upon the proxy companies' historical performance to estimate the DCF dividend growth rate?

A: No. Instead, Mr. Magee relied upon overly optimistic assumptions of dividend growth that are not justified by the companies' actual performance. Mr. Magee relied on expected EPS growth without consideration of any other measure of dividend growth. Reliance on a single speculative measure of growth can lead to unreliable cost of equity estimates when the measures are inflated, upwardly biased, and overly optimistic. In fact, *Value Line* has revised its EPS projections to make it more in line with other analysts' forecasted EPS estimates after acknowledging that EPS projections have been consistently higher than other sources.

Q: What long-run growth rate range did you determine to be sustainable?

A: I determined that a sustainable growth rate range for the companies in my proxy group ranges between a low of -1.0% and a high of 11.4%. Since the result of my growth rate range is large, I selected a growth rate range based on the median for each company included in my proxy. Ultimately, I believe that a reasonable growth range for Liberty would fall between 2.5% and 7.9% as shown on OCA Exhibit Munoz Direct, Schedule C, page 1, col. (f).

Q: Based on your DCF Model and the above information, what is Liberty's cost of common equity?

A: Using my DCF cost of equity for the companies in my proxy group as shown on my Schedule C, page 1, I conclude that a cost of common equity in the median of my DCF range, or 9.2%, reasonably compensates investors for their expected return on common equity for Liberty.

My cost of common equity recommendation is based on the level of risk faced by Liberty as it operates now. If the Board grants Liberty's proposed changes to dramatically increase the monthly customer charge whereby it shifts more fixed cost recovery to a non-volumetric rate-design, my recommended cost of common equity would need to be reduced to reflect the new, reduced level of risk faced by Liberty.

Q: Did you use the CAPM to check your DCF Model cost of common equity calculation?

A: Yes. By applying the CAPM to the proxy group of comparable companies, I calculated the current cost of common equity rate to be between 8.5% and 9.1%. My recommended ROE of 9.2% is just slightly over the top end of the range produced by the CAPM.

Q: How is the cost of common equity estimated using the CAPM?

A: The CAPM model adds the company's specific risk premium to the risk-free interest rate. The CAPM equation is:

$$K = I + (b * RP),$$

where K is the cost of common equity, I is the risk-free interest rate, b is beta, and RP is the market risk premium. The market risk premium is the market return (MR) less the risk-free interest rate.

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Q: How did you calculate the risk-free interest rate component of the risk premium?

A: U.S. Treasury securities are commonly used to measure the risk-free rate of return. According to Roger G. Ibbotson, 2016 SBBI Yearbook now published by Duff & Phelps, the geometric mean of annual total returns for long-term government bonds (*i.e.*, those with a 20-year maturity) for the period 1926-2015 is 5.6%. I believe that this 5.6% return is a reliable indicator of the risk-free interest rate. Historical total annual return is composed of income, capital appreciation, and reinvestment income. Using historical total returns provided by U.S. Treasury bonds as the measure of the risk-free rate of return better reflects investors' expected return on bond holdings than do current Treasury bond yields that change on a daily basis. Using U.S. Treasury bond yields that change continuously would distort the risk-free calculation results. Using historical total annual return eliminates the external distortion included when using current yields on U.S. Treasury bonds. Moreover, using historical total annual returns also eliminates the need to rely on speculative projected yields.

Q: Is the average 30-day yield on 10-year, 20-year, and 30-year US Treasury bonds a reliable indicator of the risk-free rate?

A: No. The average 30-day yield on 10-year, 20-year, and 30-year U.S. Treasury bonds is not reflective of long-term trends. Current and average 30-day yields on 10-year, 20-year, and 30-year U.S. Treasury bonds are a function of the Federal Reserve Board's policy to increase nominal GDP by maintaining low interest rates through monetary easing through the purchasing of 10-year, 20-year, and 30-year long-term U.S. Treasury bonds. In addition to the Federal Reserve Board's policy, the current yields on 10-year, 20-year, and 30-year U.S. Treasury bonds do not reflect the increased demand in U.S. Treasury bond maturities.

Q: On what market return did you rely?

A: I relied on Roger Ibbotson's geometric mean of the total market returns from the Standard & Poor's 500 (S&P 500) between 1926 and 2015. The geometric mean of Ibbotson 2016 SBBI Yearbook now published by Duff & Phelps's S&P 500 total market return is 10.0%. My reliance on a 10.0% market return is consistent with Dr. Ibbotson and Dr. Chen's long-run market outlook. Dr. Ibbotson and Dr. Chen, financial experts and authors of Duff and Phelps's 2016 SBBI Yearbook, publish historical data based on a projected supply-side model that predicts a total market return that will average 9.28% over the long run, assuming historical inflation rates.[1]

Q: Why is the geometric mean a good indicator of average market return?

A: The geometric mean accurately measures historical rate of return averages of an investment over time. Because it smoothes out the non-normal distribution of compounded total return averages, it is a reliable indicator of expected returns. On the other hand, Mr. Magee relied on arithmetic average returns to estimate the risk premium. My discussion of why it is important to rely on geometric mean as opposed to arithmetic mean to estimate equity returns is in the response section of my testimony.

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[1] Ibbotson, Roger G. and Peng, Chen. 2016 Ibbotson ® SBBI ® Duff & Phelps, *Supply Model,* Chapter 10, page 31.

Q: What market risk premium did you assume in your analysis?

A: I assumed a market risk premium of 4.4%. I calculated this 4.4% risk premium by taking the difference between the estimated geometric market return of 10.0% and the 20-year U.S. Treasury bonds geometric mean return of 5.6% as shown in my Schedule D, Table I. Furthermore, my equity risk premium result is similar to Dr. Ibbotson's supply-side earnings model projected market risk premium of 4.04% and falls within the IUB reasonable risk premium range of 250 to 450 basis points above the yield on A-rated public utility bonds.

Q: Do you believe the market risk premium is a reliable measure of the cost of equity for Liberty?

A: No. There is significant empirical evidence of historical volatility in the market risk premium. Over time, the relationship between the market risk premium and interest rates has changed as the volatility in equity market return has decreased and volatility in the bond market has increased. As shown in my Schedule E, page 1, the changes in risk of U.S. Treasury bills between 1926 and 2015 have produced a distribution of the risk premiums ranging from a negative 44.4% to a positive 53.5% with a risk premium standard deviation of approximately 21%. The standard deviation of the market risk premium is more than half the risk premium average. If the average of the historical risk premiums has a variance of this magnitude, then the result is not statistically significant, and inferences based on this data would not be reliable.

Q: What are betas, and how did you calculate them?

A: Betas are a measure of a company's systemic non-diversifiable equity risk. Betas measure the price movements of a firm's stock in relation to the price movements of the overall stock market. Thus, betas measure a security's risk relative to the overall market. The overall market has a beta of one. Securities that are riskier than the market will have betas that are greater than one. Securities that are less risky than the market will have betas that are less than one. Betas also measure the relative riskiness between firms. For example, a firm that has a beta of 0.4 is typically less risky than a firm that has a beta of 0.6.

I used *Value Line's* adjusted betas for my proxy group of natural gas utilities. The adjusted beta for my proxy group of companies falls within a range between 0.65 and 0.80. The average beta for the proxy group is 0.74 as shown in my Schedule D, Table II. Since betas indicate relative estimates of risk, the higher the beta, the higher the risk and the higher the cost of common equity. These betas, ranging from 0.65 to 0.85, reflect a lower risk than the Standard & Poor's 500 that has a beta of 1.0.

Q: What is Liberty's current cost of common equity as calculated using the CAPM model?

A: Using the CAPM model on my proxy group, I calculated Liberty's current cost of equity to be between 8.5% and 9.1% as shown in OCA Exhibit Munoz Direct, Schedule D, Table III.

Q: What did you conclude about your DCF Model results based upon the results from the CAPM model?

A: My recommended cost of equity of 9.2% falls slightly outside my CAPM range of 8.5% and 9.1% and reasonably reflects a fair ROE for Liberty. Using CAPM as a check confirms the more reliable DCF results on which I base my ROE recommendation.

Cost of Capital

Q: What is the cost of capital?

A: The cost of capital is a company's cost to obtain debt and equity capital. It is used as the discount rate to determine the value of any investment project. Common and preferred equity investors and holders of long-term debt provide capital funds.

Q: What is the WACC?

A: The WACC is the expected return on a portfolio of all of a firm's securities. The average cost of capital is the best indicator of a company's overall rate of return. It measures the appropriate cost-weight given to each capital component. Most importantly, applying the WACC as a utility company's allowed rate of return provides the utility company the opportunity to earn revenues sufficient to cover its long-term debt interest, preferred equity costs, and a return on its common equity investment. It is the WACC that is ultimately used by regulators to determine the return allowed on a utility's rate base.

Q: Why should rates of return be set based on the WACC?

A: Financial theory asserts that firms make investment decisions to maximize the value of an investment. The profit maximization objective induces investors to make investment decisions in projects with internal rates of return that are equal to or greater than their cost of capital. In a competitive environment, equilibrium is reached when the marginal yield on an investment is zero. In other words, the return on the last investment project is equal to its cost. Since regulation is a surrogate for competition, the theoretical evidence of financial theory asserts that a natural monopoly's "fair rate of return" should equal the cost of the capital supporting the company's investment. In this case, the cost of the capital recognized by a company should be equal to its WACC.

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Q: What would be the consequence of not setting the allowed rate of return equal to the WACC?

A: Returns in excess of the company's WACC are paid by ratepayers through higher rates that provide for revenues that contribute to a return in excess of the utility's authorized rate of return. In contrast, returns lower than the WACC will not produce sufficient returns to cover all costs of long-term debt, preferred equity, and expected stockholder returns on their common equity investment. Consequently, the utility will have a diminished ability to access capital markets in order to procure capital that is necessary to provide safe and reliable service.

Capital Structure

Q: What is Liberty's actual capital structure?

A: Liberty's capital structure is 100% common equity, because Liberty has not issued any long-term debt. As shown in my Schedule F, Liberty does not obtain capital directly from the capital market, but rather is financed solely through its parent companies. What this means is that Liberty's capital structure is artificially created by its parent companies. Since Liberty does not issue any long-term debt and has no outstanding financial obligation to service any long-term debt, it is as if Liberty is financing its service operation entirely with common equity.

Q: Is it reasonable to set regulated natural gas rates for Liberty's Iowa operations using a capital structure that consists solely of 100% common equity capital?

A: No. In fact, it is telling that not even Liberty is proposing to use its actual capital structure to set rates in this proceeding. Company witness Magee proposed a hypothetical capital structure that consists of 46% long-term debt and 54% common equity.

It is inefficient and unreasonably expensive to finance regulated utility operations with either high amounts or entirely common equity capital, which is generally the most expensive capital in the marketplace. The cost of long-term debt is considerably lower than the cost of common equity capital. Furthermore, the interest on long-term debt is deductible in computing the company's annual income tax liability. Thus, there are significant income tax savings from including long-term debt in the mix of capital relied on to finance the company. Giving up these tax benefits would be inefficient. Because utilities in Iowa are required by law to operate in an efficient manner, they should and do take advantage of the lower financing costs and tax advantages associated with long-term debt.

Q: You mentioned that Company witness Magee proposed a hypothetical capital structure that includes 46% long-term debt. Do you agree that Mr. Magee's proposed capital structure is reasonable?

A: No. In my opinion, his proposed capital structure that reflects only 46% long-term debt is inefficient and unreasonable and should not be approved by the Board in this proceeding.

Q: What capital structure do you recommend be approved by the Board in this proceeding?

A: I recommend a capital structure that reflects 53% long-term-debt and 47% common equity. This is set forth on my Schedule A, page 1.

Q: Because Liberty has not issued any long-term debt of its own, how did you determine that a capital structure with 53% long-term debt and 47% common equity is an efficient and reasonable capital structure to recommend in this proceeding?

A: I again relied on the proxy companies that I used to estimate Liberty's cost of common equity. In addition, I looked at the amount of long-term debt issued by Liberty's parent companies as indicators of the amount of long-term debt that is actually financing Liberty.

Q: Why did you look at the proxy companies for your capital structure recommendation?

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A: Because the proxy companies have utility operations and risks similar to Liberty and were the basis for my ROE recommendation, I believed that they would be useful in determining the appropriate capital structure for Liberty. For example, the equity ratios for the seven proxy companies range from a low of 47% common equity and 53% debt to a high of 57.5% common equity and 42.5% debt.

Q: How did you go about estimating the amount of long-term debt outstanding at the parent company level used to finance Liberty?

A: It is important to understand that Liberty is a wholly-owned subsidiary of Liberty Utilities Corporation (LUCO), and LUCO is a wholly-owned subsidiary of Algonquin Power & Utilities Corp. (Algonquin). Each of these parent companies have issued long-term debt, a portion of which essentially finances Liberty.

Q: What is LUCO's capital structure?

A: LUCO's 13-month average capital structure ending in June 2016 has a common equity and long-term debt ratio that includes approximately {[redacted]} common equity and {[redacted]} long-term debt.

Q: What are the balances of long-term debt in LUCO's capital structure?

A: As shown on page 2 of my Confidential Schedule A, LUCO's long-term debt balance is {[redacted]}.

NOTE: Confidential material has been identified by placing it between curly brackets { }.

Q: What is Algonquin's capital structure?

A: Algonquin's 13-month average capital structure ending in June 2016 is made up of approximately {[redacted]} common equity, {[redacted]} preferred equity, and {[redacted]} long-term debt. Algonquin's 13-month average long-term debt balance is {[redacted]} and its 13-month average common equity balance is {[redacted]}.

Q: How does Algonquin's capital structure information impact your recommendation?

A: Since LUCO's common equity ratio is made up of a blend of other sources of capital, LUCO's common equity ratio has to reflect its relationship to Algonquin and the financial synergies associated with this relationship. The recognition of other sources of capital in LUCO's capital structure justify a much lower common equity ratio than the equity ratio recommended by Liberty.

Q: What is LUCO's effective common equity ratio?

A: As shown in my Confidential Schedule A, page 3, LUCO's effective common equity ratio is actually approximately {[redacted]}.

Q: How did you determine LUCO's effective common equity ratio to be {[redacted]}?

A: As shown on page 3 of my Confidential Schedule A, page 2, line 7, LUCO's 13-month average ending June 2016 common equity ratio is {[redacted]}. But this does not present an accurate picture of the amount of long-term debt financing at LUCO. To determine the effective capital structure, one must assume that a certain percentage of LUCO's common equity ratio is attributed to capital from Algonquin. For example, as shown in my Confidential Schedule A, page 3, lines 10 to 12, LUCO's capital structure is composed of {[redacted]} preferred equity, {[redacted]} common equity, and {[redacted]} attributable to Algonquin's long-term debt, for a total common equity ratio of {[redacted]}. I determined these percentages in LUCO's common equity ratio by multiplying column (B) with column (C) in lines 10 to 12 of my Confidential Schedule A, page 3.

Q: If LUCO's effective capital structure reflects {[redacted]} common equity and {[redacted]} long-term debt, how did you arrive at your recommended capital structure of 47% common equity and 53% long-term debt for Liberty?

A: The {[redacted]} effective equity ratio falls outside of the range of reasonableness of the proxy companies that I relied on to determine the cost of equity for Liberty. Although the LUCO effective capital structure reflects the financial synergies that exist within Algonquin's corporate structure, LUCO's effective capital structure does not reflect the financial reality of the relative risk associated with my proxy companies. As a result, I recommend a capital structure of 47% common equity and 53% long-term debt. My recommended capital structure is more in line with the financial risk associated with the proxy companies used to determine the ROE in order to produce a cost of capital reflective of Liberty's relative risk. In other words, although LUCO's effective capital structure informs the relative reasonableness of a capital structure for Liberty, it does not determine my overall recommendation.

Q: Why did you not rely on the average common equity ratio as a reasonable proxy for a hypothetical capital structure?

A: I did not rely on the average equity ratio of the proxy companies of 54% because the effective capital structure of LUCO suggests something significantly lower. The financial risk of LUCO's capital structure suggest that Liberty's equity ratio is at the lower tier of risk given the financial risk profile and financial synergies that exist within the corporate structure and ownership of Liberty. These financial risk reductions justify a common equity ratio lower than the average of the proxy companies. A 47% common equity ratio reflects those financial risk considerations while taking into account the actual capital financing of Liberty's operations.

Q: Using your recommended capital structure, what is Liberty's WACC?

As shown in my Confidential Schedule A, I recommend a WACC of 6.884% for Liberty based on a 47% common equity ratio and 53% long-term debt capital structure.

Response to Mr. Keith Magee

Q: Do you have any opinion on Mr. Magee's DCF results?

A: Yes. Mr. Magee's mean and median DCF results shown in the "Mean ROE" column, column 11, of Keith Magee Exhibit 1, closely match my DCF recommendation and are a more reliable predictor of the cost of equity. However, Mr. Magee's exclusive reliance on forecasted EPS as the single measure of dividend growth produced high end outliers for each company which are not representative of the cost of equity.

Based on the information provided by Mr. Magee, it is not clear if the high end results are part of his consideration for estimating Liberty's cost of equity or if Mr. Magee adhered to just the "Mean ROE" column shown in column 11 of Keith Magee Exhibit 1. In my opinion, the cost of equity estimates Mr. Magee should rely on must adhere to a measure of central tendency, mean or median. The frequency and distribution of his DCF results will indicate that the mean results shown in column 11 of his schedule Keith Magee Exhibit 1 are statistically reliable and closely match my range of reasonableness and recommendation.

Q: Do you believe a flotation cost adjustment is applicable to Liberty's cost of equity as proposed by Mr. Magee?

A: No. A flotation cost adjustment in the manner presented by Mr. Magee is not applicable. Share issuance cost recovery from issuing new shares should be explicit and the cost should be included above-the-line and not included in the calculation of the ROE. Furthermore, the argument for a flotation cost adjustment and recovery based on adding an issuance cost rate to the dividend is also incorrect. Perpetual cost recovery based on a calculated share issuance rate is just an attempt to inflate the ROE. The data from the proxy companies indicates that no additional cost rate should be added to the ROE estimate since the average price-to-book ratio of the utilities in my proxy group already account for a fair rate sufficient to recover any issuance cost rate based on my ROE recommendation. As shown on OCA Exhibit Munoz Direct, Schedule B, page 1, the average price-to-book-ration is 2.0. This ratio indicates that share equity prices trade far above book value and already account for any market pressure of new share issuance. The Board has previously denied requests for flotation cost adjustments premised on the same arguments of share issuance expense and market pressure.[2]

Q: Do you have any concern regarding Mr. Magee's ROE estimates based upon his CAPM?

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[2] *In re: Iowa-American Water Company*, Docket No. RPU-2013-0002, Final Order (Feb. 28, 2014), page 20.

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A: Yes. I am concerned with Mr. Magee's current market risk premium (MRP) of 10.5% and 11.18%, and his expected market risk premium of 9.99% and 10.68%. First, Mr. Magee distorts his current MRP of 10.5% and 11.18% by relying on a DCF average market return of 13.14% based on *Value Line's* S&P 500 market return and 13.83% DCF market return based on Bloomberg's total market return information. Mr. Magee further distorts his MRP calculation by only relying on the current Treasury bond yield of 2.65% as published by Bloomberg Professionals. Second, Mr. Magee calculated his forward-looking MRP by relying on the same speculative S&P 500 market return used in his calculation of the current MRP and a speculative risk-free rate of 3.15%. Both S&P 500 average market returns (*Value Line* and Bloomberg) were derived using only the simple arithmetic average.

Q: Do you agree with Mr. Magee's calculation of his DCF market return for his forward-looking CAPM MRP?

A: No. In direct contrast with 80 years of historical market returns, Mr. Magee relies on a DCF market return of 13.14% based on *Value Line's* S&P 500 market return and 13.83% DCF market return based on Bloomberg's total market return information. Both expected market returns assume perpetual earnings growth rate of 10.89% and 10.78%. Mr. Magee has not shown that this market return is sustainable over the long run. Mr. Magee's market return exceeds both the historical geometric and arithmetic mean compounded total annual return for the period between 1926 and 2015 and contradicts Dr. Ibbotson's and Dr. Chen's supply-side long-run estimated market return model.

Q: Do you agree with Mr. Magee's calculation of his projected risk-free rate of return and his current risk-free rate of return used in his CAPM MRP?

Mr. Magee's current risk-free estimate focuses on interest rates over a shorter time-frame and only relies on a single current spot yield which is assumed to be outstanding into perpetuity. In contrast, I relied on 80 years of historical data of 20-year Treasury bond returns to reflect the long-life nature of an asset such as common equity. Longer-term total market return reflects the true expected risk-free rate, since it reflects market changes and total return expectation.

Furthermore, there is empirical evidence that most interest rate forecasts published by Blue Chip, IHS, and EIA have been overstated. There has been a consensus that yields on long-term treasuries will increase due to "normalized" monetary policy. However, this has not occurred since the Federal Reserve Open Market Committee (FED) began its accommodative monetary policy in 2011. Relying on projected interest and interest rates forecasts will continue to overstate the risk free rate as they have done over the past 5 years.

Q: Explain in more detail your concern with Mr. Magee's calculated MRP using arithmetic averages as opposed to geometric averages.

A: My concern is that arithmetic averages distort returns realized over a historical period. This occurs because equity returns are not normally distributed. If returns were normally distributed and independent, the mean and the variance would completely describe the distribution of stock returns. Stock returns, however, are not normally distributed or independent. Stock returns have "fatter tails" than a normal bell shaped distribution. A study highlighted the difference between actual "fat tails" distribution of stock returns and the assumed normal bell curve distribution. This study estimated stock returns averaging about 9.5% (excluding dividends).[3] However, if the 50 worst days were excluded (less than 1.0% of the observations in the study), returns soar to 18.2%. Similarly, if we excluded the best 50 days, returns would only be a mere 1.0% over this same period. These actual returns were compared to stock returns assuming a normal bell shape distribution. The contrast is depicted in the Table I.

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[3] "The Wisdom and Whims of the Collective" Michael J. Mauboussin, CFA Institute, December 2007, pp. 1–7.

Table I

Distribution	**Actual Distribution**	**Assumed Normal**
Returns	**9.5%**	**9.5%**
Excluding Worst 50 Days	**18.2**	**15.2**
Excluding Best 50 Days	**1.0**	**3.5**

In short, a few good or bad days have disproportionate influence and underscore the fact that taking into account actual "fat tailed" returns affect results dramatically. Since stock returns are not normally distributed as assumed by Mr. Magee, the arithmetic mean as an indicator of expected returns is not reliable.

The use of the arithmetic mean also assumes that stock returns are independent of each other. This assumption is, at best, more of a convenience to researchers than definitively established. Almost all assets have positive correlations.

Q: Should Mr. Magee rely on the historical Risk Premium Model and its corresponding adjustment?

A: No. Mr. Magee asserts that a further adjustment to the risk premium is necessary because the historical equity risk premium is not constant and inversely related to interest rate. To address the resulting distortion of the risk premium with varying interest rates, Mr. Magee calculates an equity risk premium adjustment that compares the changes in risk premium with the changes in interest rates over time. Mr. Magee calculates risk premium using the difference between historical 26-year allowed ROEs and the average yield of Moody's Baa rated-public utility bonds.

I disagree with Mr. Magee's conclusion that the risk premium changes by 58 basis points for every one percent change in bond yield. Mr. Magee bases his calculation on a spurious relationship between both the dependent variable (risk premium) and independent variable (average utility bond yield). However, there is also a high relationship between a third independent variable (assumed ROE) and risk premium. Both ROE and the risk premium are a function of interest rates. By omitting the also high relationship between ROE and risk premium, Mr. Magee's regression analysis erroneously produces a coefficient that appears to be entirely explained by the relationship between risk premium and interest rates.

Q: Do you agree with Mr. Magee's size premium adjustment?

A: No. I believe these adjustments are unwarranted, speculative, and at best, an attempt to arbitrarily inflate the ROE for Liberty at the expense of its ratepayers.

First, even if there was any merit in the data that supports the size effect, most of the size effect studies were not done for the utility industry. The studies that point out the shortcomings of valuation models that demonstrate the size effect were not performed for utility stock. Dr. A. Wong published a study titled, "Utility Stocks and the Size Effect: An Empirical Analysis" in which he concluded that:

> After controlling for equity values, there is some weak evidence that firm size is a missing factor from the CAPM for the industrial but not for utility stocks.

Second, it is not clear that if the size phenomenon existed, the size premium should be applied automatically. In fact, Dr. Roger Morin, author and expert witness, has acknowledged that size effect may be a "statistical mirage, whereby size is proxy for the effect of different economic variables [.]", and it is "most likely the result of a liquidity premium" due to "lack of marketability and liquidity".[4]

Third, the size effect has been variable over time. It appears that the size phenomenon appeared in the period of 1926-1983. During this period, it appears that smaller companies outperformed larger companies in terms of realized return. However, analysts conclude that when we look at the data from 1984 on, larger companies' realized return outperformed those of smaller companies.[5]

Fourth, the effects that could possibly explain the size phenomenon are not germane to Liberty because Liberty is not a stand-alone utility. Liberty is a subsidiary of large holding structure. Liberty relies on LUCO and Algonquin to acquire relatively low cost capital. Liberty does not issue any debt of its own and its ability to acquire capital depends on the credit strength of both parents. The Board has previously rejected the size adjustment requests noting that there was no persuasive evidence to persuade the Board to isolate individual factors to adjust the ROE.[6]

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[4] Morin, Rogers A. "New Regulatory Finance," *Public Utilities Report, Inc.* June 2006, page 49.

[5] Dimson, Marsh, Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns*, Princeton University Press, Princeton NJ, 2002, and Block, S. B. "A Study of Financial Analysts: Practice and Theory," Association for Investment Management and Research, July/August 1999.

Q: Does this conclude your direct testimony?

A: Yes.

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[6] *In re: Iowa-American Water Company,* Docket No. RPU-2013-0002, Final Order (Feb. 28, 2014), page 18.

PUBLIC

STATE OF IOWA)
) SS: AFFIDAVIT OF MARCOS MUNOZ
COUNTY OF POLK)

I, Marcos Munoz, being first duly sworn on oath, depose and state that I am the same Marcos Munoz identified in the foregoing Direct Testimony; that I have caused the foregoing Direct Testimony to be prepared and am familiar with the contents thereof, and that the foregoing Direct Testimony as identified therein is true and correct to the best of my knowledge, information and belief as of the date of this Affidavit.

/s/ Marcos Munoz
Marcos Munoz

Subscribed and sworn to before me, A Notary Public, in and for said County and State, this 7th day of November, 2016.

/s/ Craig Graziano
Notary Public

My Commission expires: June 14, 2017

PUBLIC

OFFICE OF CONSUMER ADVOCATE

DIRECT EXHIBIT
SCHEDULES A - F

OF

MARCOS MUNOZ

IN RE: LIBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP. d/b/a LIBERTY UTILITIES

DOCKET NO. RPU-2016-0003

November 7, 2016

Index of Direct Exhibit, Schedules A-F
Marcos Munoz
RPU-2016-0003

Schedule	Subject	PDF	Excel
A	Capital Structure	✓	✓
B	Proxy Group Sample	✓	✓
C	Proxy Group DCF Calculations	✓	✓
D	CAPM ROE	✓	✓
E	Risk Premium Ranges	✓	✓
F	Response to OCA Data Request No. 17	✓	

OCA Exhibit Munoz Direct
Schedule A
Page 1 of 3
RPU-2016-0003

Liberty Utilities (Midstates Natural Gas)

		Ratio	Cost	Weighted Cost
	(A)	(B)	(C)	(D)
1	Long-term Debt	53%	4.830%	2.560%
2	Preferred Stock	0%	0.000%	0.000%
3	Common Equity	47%	9.200%	4.324%
4	Total	100%		**6.884%**

Source: Line 1, column (C), Munoz-Direct Workpapers Schedule A (cost of capital support)

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OCA Exhibit Munoz Direct
Schedule A
Page 2 of 3
RPU-2016-0003

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Algonquin Power & Utilities Corp.

		Amount	Ratio
	(A)	(B)	(C)
1	Long-term Debt	[redacted]	[redacted]
2	Preferred Equity	[redacted]	[redacted]
3	Common Equity	[redacted]	[redacted]
4	Total	[redacted]	[redacted]

Liberty Utilities Corporation (LUCO)

		Amount	Ratio
	(A)	(B)	(C)
5	Long-term Debt	[redacted]	[redacted]
6	Preferred Stock	[redacted]	[redacted]
7	Common Equity	[redacted]	[redacted]
8	Total	[redacted]	[redacted]

Source: Munoz-Direct Workpapers Schedule A (cost of capital support).xls

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OCA Exhibit Munoz Direct
Schedule A
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LUCO's Effective Equity

	(A)	(B) Algonquin Ratios	(C) LUCO's Equity Ratio	(D) Percent Supported by Algonquin	(E)
10	Long-Term Debt	[redacted]	[redacted]	[redacted]	
11	Preferred Equity	[redacted]	[redacted]	[redacted]	
12	Common Equity	[redacted]	[redacted]	[redacted]	
13	Total	[redacted]		[redacted]	

Source: Munoz-Direct Workpapers Schedule A (cost of capital support)

LUCOs Effective Capital Structure

		Ratio	Cost Rate	Weighted Cost	Amount
	Long-term Debt				
14	Algonquin	[redacted]	[redacted]	[redacted]	[redacted]
15	LUCO	[redacted]	[redacted]	[redacted]	[redacted]
16	Total Debt	[redacted]	[redacted]	[redacted]	[redacted]
17	Preferred Equity	[redacted]	[redacted]	[redacted]	[redacted]
18	Common Equity	[redacted]	[redacted]	[redacted]	[redacted]
19	Total	[redacted]		[redacted]	[redacted]

Source: Munoz-Direct Workpapers Schedule A (cost of capital support)

LUCO's Effective Weighted Cost of Capital

		Amount	Ratio	Cost Rate	Weighted Cost
20	Long-term Debt	[redacted]	[redacted]	[redacted]	[redacted]
21	Preferred	[redacted]	[redacted]	[redacted]	[redacted]
22	Common Equity	[redacted]	[redacted]	[redacted]	[redacted]
23	Total	[redacted]	[redacted]		[redacted]

Source: Munoz-Direct Workpapers Schedule A (cost of capital support)

Natural Gas Utilities Sample

		Common Equity Ratio	Beta	Earnings Ratio P/E	Market Capitalization (in billion)	Market to Book Ratio P/B
Atmos Energy Corporation	ATO	56.5%	0.75	17.50	$ 7.80	2.3
Spire Inc	SR	47.0%	0.70	16.50	$ 3.00	1.6
New Jersey Resources Corporation	NJR	56.8%	0.80	16.60	$ 3.00	2.2
Northwest Natural Gas Company	NWN	57.5%	0.65	23.70	$ 1.70	2.1
South Jersey Industries, Inc.	SJI	50.8%	0.80	17.90	$ 2.40	1.8
Southwest Gas	SWX	50.7%	0.75	19.40	$ 3.40	2.0
WGL Holdings, Inc.	WGL	56.1%	0.75	17.00	$ 3.30	2.3
Arithmetic Average		53.6%	0.74	18.37	3.514	2.0
Median		56.1%	0.75	17.50	3.000	2.1
Sample High		57.5%	0.80	23.70	7.800	2.3
Sample Low		47.0%	0.65	16.50	1.700	1.6

Data is primarily Value Line Investment Survey sheets.
M/B ratio is from Yahoo Finance 9/5/2016

ATMOS ENERGY CORP. NYSE-ATO

RECENT PRICE 74.90 | **P/E RATIO** 21.4 (Trailing: 22.7 Median: 15.0) | **RELATIVE P/E RATIO** 1.12 | **DIV'D YLD** 2.4% | **VALUE LINE**

TIMELINESS 2 Lowered 6/17/16
SAFETY 1 Raised 6/6/14
TECHNICAL 1 Raised 8/19/16
BETA .75 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+45%)	*12%*
Low	90	(+20%)	*7%*

Insider Decisions

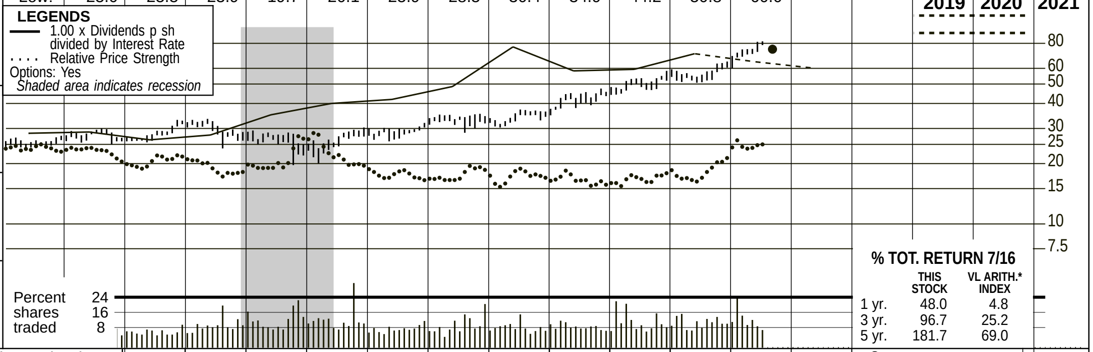
	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	2	7	0	2	0	0	2	6	0
to Sell	0	0	1	0	0	0	0	1	0

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	130	159	212
to Sell	137	133	142
Hld's(000)	69743	70628	71888

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
High:	30.0	33.1	33.5	29.3	30.3	32.0	35.6	37.3	47.4	58.2	64.8	82.0
Low:	25.0	25.5	23.9	19.7	20.1	25.9	28.5	30.4	34.9	44.2	50.8	60.0

Target Price Range
2019 | 2020 | 2021



% TOT. RETURN 7/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	48.0	4.8
3 yr.	96.7	25.2
5 yr.	181.7	69.0

Atmos Energy's history dates back to 1906 in the Texas Panhandle. Over the years, through various mergers, it became part of Pioneer Corporation, and, in 1981, Pioneer named its gas distribution division Energas. In 1983, Pioneer organized Energas as a separate subsidiary and distributed the outstanding shares of Energas to Pioneer shareholders. Energas changed its name to Atmos in 1988. Atmos acquired Trans Louisiana Gas in 1986, Western Kentucky Gas Utility in 1987, Greeley Gas in 1993, United Cities Gas in 1997, and others.

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
75.27	66.03	79.52	53.69	53.12	48.15	38.10	42.88	49.22	40.82	*30.70*	*32.75*	**Revenues per sh A**	*45.85*
4.26	4.14	4.19	4.29	4.64	4.72	4.76	5.14	5.42	5.81	*6.05*	*6.30*	**"Cash Flow" per sh**	*7.25*
2.00	1.94	2.00	1.97	2.16	2.26	2.10	2.50	2.96	3.09	*3.35*	*3.55*	**Earnings per sh A B**	*4.20*
1.26	1.28	1.30	1.32	1.34	1.36	1.38	1.40	1.48	1.56	*1.68*	*1.80*	**Div'ds Decl'd per sh C■**	*2.15*
5.20	4.39	5.20	5.51	6.02	6.90	8.12	9.32	8.32	9.61	*9.90*	*10.10*	**Cap'l Spending per sh**	*10.60*
20.16	22.01	22.60	23.52	24.16	24.98	26.14	28.47	30.74	31.48	*31.95*	*31.15*	**Book Value per sh**	*36.65*
81.74	89.33	90.81	92.55	90.16	90.30	90.24	90.64	100.39	101.48	*107.00*	*110.00*	**Common Shs Outst'g D**	*120.00*
13.5	15.9	13.6	12.5	13.2	14.4	15.9	15.9	16.1	17.5	*Bold figures are Value Line estimates*		**Avg Ann'l P/E Ratio**	*24.0*
.73	.84	.82	.83	.84	.90	1.01	.89	.85	.89			**Relative P/E Ratio**	*1.50*
4.7%	4.2%	4.8%	5.3%	4.7%	4.2%	4.1%	3.5%	3.1%	2.9%			**Avg Ann'l Div'd Yield**	*2.2%*
6152.4	5898.4	7221.3	4969.1	4789.7	4347.6	3438.5	3886.3	4940.9	4142.1	*3285*	*3600*	**Revenues ($mill) A**	*5500*
162.3	170.5	180.3	179.7	201.2	199.3	192.2	230.7	289.8	315.1	*360*	*390*	**Net Profit ($mill)**	*500*
37.6%	35.8%	38.4%	34.4%	38.5%	36.4%	33.8%	38.2%	39.2%	38.3%	*36.5%*	*37.0%*	**Income Tax Rate**	*40.0%*
2.6%	2.9%	2.5%	3.6%	4.2%	4.6%	5.6%	5.9%	5.9%	7.6%	*11.0%*	*10.8%*	**Net Profit Margin**	*9.1%*
57.0%	52.0%	50.8%	49.9%	45.4%	49.4%	45.3%	48.8%	44.3%	43.5%	*40.0%*	*43.0%*	**Long-Term Debt Ratio**	*45.0%*
43.0%	48.0%	49.2%	50.1%	54.6%	50.6%	54.7%	51.2%	55.7%	56.5%	*60.0%*	*57.0%*	**Common Equity Ratio**	*55.0%*
3828.5	4092.1	4172.3	4346.2	3987.9	4461.5	4315.5	5036.1	5542.2	5650.2	*5700*	*6000*	**Total Capital ($mill)**	*8000*
3629.2	3836.8	4136.9	4439.1	4793.1	5147.9	5475.6	6030.7	6725.9	7430.6	*8100*	*8560*	**Net Plant ($mill)**	*10200*
6.1%	5.9%	5.9%	5.9%	6.9%	6.1%	6.1%	5.9%	6.4%	6.6%	*7.5%*	*8.0%*	**Return on Total Cap'l**	*7.5%*
9.8%	8.7%	8.8%	8.3%	9.2%	8.8%	8.1%	8.9%	9.4%	9.9%	*10.5%*	*11.5%*	**Return on Shr. Equity**	*11.5%*
9.8%	8.7%	8.8%	8.3%	9.2%	8.8%	8.1%	8.9%	9.4%	9.9%	*10.5%*	*11.5%*	**Return on Com Equity**	*11.5%*
3.6%	3.0%	3.1%	2.7%	3.5%	3.3%	2.8%	4.0%	4.7%	4.9%	*5.5%*	*5.5%*	**Retained to Com Eq**	*5.5%*
63%	65%	65%	68%	62%	62%	65%	56%	50%	51%	*50%*	*51%*	**All Div'ds to Net Prof**	*52%*

CAPITAL STRUCTURE as of 6/30/16
Total Debt $3126.1 mill. **Due in 5 Yrs** $1157.9 mill.
LT Debt $2205.6 mill. **LT Interest** $135.0 mill.
(LT interest earned: 5.4x; total interest coverage: 5.4x)
Leases, Uncapitalized Annual rentals $16.5 mill.
Pfd Stock None
Pension Assets-9/15 $450.9 mill. **Oblig.** $508.6 mill.
Common Stock 103,847,858 shs. **as of 7/29/16**
MARKET CAP: $7.8 billion (Large Cap)

CURRENT POSITION ($MILL.)	2014	2015	6/30/16
Cash Assets	42.3	28.7	66.2
Other	733.5	602.3	582.7
Current Assets	775.8	631.0	648.9
Accts Payable	311.6	238.9	198.9
Debt Due	196.7	457.9	920.5
Other	402.4	458.0	410.4
Current Liab.	910.7	1154.8	1529.8
Fix. Chg. Cov.	637%	743%	750%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	-2.0%	-6.5%	*.5%*
"Cash Flow"	5.0%	4.5%	*5.0%*
Earnings	5.5%	7.0%	*6.5%*
Dividends	2.0%	2.5%	*6.5%*
Book Value	5.0%	5.0%	*3.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2013	1034.2	1309.0	857.9	685.2	3886.3
2014	1255.1	1964.3	942.7	778.8	4940.9
2015	1258.8	1540.1	686.4	656.8	4142.1
2016	906.2	1132.3	632.9	*613.6*	*3285*
2017	*930*	*1280*	*710*	*680*	*3600*

Fiscal Year Ends	EARNINGS PER SHARE A B E Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2013	.85	1.23	.36	.08	2.50
2014	.95	1.38	.45	.23	2.96
2015	.96	1.35	.55	.23	3.09
2016	1.00	1.38	.69	*.28*	*3.35*
2017	*1.06*	*1.47*	*.68*	*.34*	*3.55*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.345	.345	.345	.35	1.39
2013	.35	.35	.35	.37	1.42
2014	.37	.37	.37	.39	1.50
2015	.39	.39	.39	.42	1.59
2016	.42	.42	.42		

BUSINESS: Atmos Energy Corporation is engaged primarily in the distribution and sale of natural gas to roughly three million customers through six regulated natural gas utility operations: Louisiana Division, West Texas Division, Mid-Tex Division, Mississippi Division, Colorado-Kansas Division, and Kentucky/Mid-States Division. Gas sales breakdown for fiscal 2015: 66%, residential; 29%, commercial; 3%, industrial; and 2% other. The company has around 4,760 employees. Officers and directors own approximately 1.5% of common stock (12/15 Proxy). President and Chief Executive Officer: Kim R. Cocklin. Incorporated: Texas. Address: Three Lincoln Centre, Suite 1800, 5430 LBJ Freeway, Dallas, Texas 75240. Telephone: 972-934-9227. Internet: www.atmosenergy.com.

Atmos Energy is about to close the books on a solid fiscal 2016 (concludes September 30th). The core natural gas distribution unit has benefited nicely from rate adjustments in the Mid-Tex, Mississippi, and West Texas divisions. Meanwhile, the performance of the regulated pipeline business was aided by higher revenue from the Gas Reliability Infrastructure Program (GRIP) filings approved in fiscal 2015 and 2016. In all, we look for full-year share net to grow about 8% versus the fiscal 2015 total. The bottom line next year stands to advance at a similar percentage rate, assuming that operating margins expand further.

Activity has been brisk on the rate-filing front. Through the first nine months of fiscal 2016, Atmos was able to finish 15 rate-case proceedings, resulting in a $63.7 million rise in annual operating income. What's more, a few ratemaking efforts are in progress seeking $24.5 million of annual operating income. But there are no guarantees that the company will receive everything it wants.

***Value Line* is constructive about Atmos' prospects out to 2019-2021.** It is one of the nation's largest natural gas-only distributors, presently with around three million customers spread across several states, including Texas, Louisiana, and Mississippi. Also, the other units, particularly pipelines, seem to have solid overall growth potential. Lastly, we believe management will eventually resume its successful strategy of acquiring less efficient utilities and shoring up their profitability via cost-reduction initiatives, rate relief, and aggressive marketing efforts. (The last big deal happened in October, 2004, when Atmos bought TXU Gas Company.)

The stock touched its highest price point over the past few months. It appears that move can be traced partly to the energy firm's decent earnings in fiscal 2016. Consequently, these shares possess a 2 (Above Average) rank for Timeliness. Other positives include the healthy level of current dividend income (plus prospects of additional hikes in the well-covered payout), the 1 (Highest) Safety rank, and excellent score for Price Stability. In all, a broad range of investors ought to find something to like here.

Frederick L. Harris, III September 2, 2016

(A) Fiscal year ends Sept. 30th. **(B)** Diluted shrs. Excl. nonrec. items: '06, d18¢; '07, d2¢; '09, 12¢; '10, 5¢; '11, (1¢). Excludes discontinued operations: '11, 10¢; '12, 27¢; '13, 14¢. Next egs. rpt. due early Nov.
(C) Dividends historically paid in early March, June, Sept., and Dec. ■ Div. reinvestment plan. Direct stock purchase plan avail.
(D) In millions.
(E) Qtrs may not add due to change in shrs outstanding.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	90

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NEW JERSEY RES. NYSE-NJR

RECENT PRICE 34.27 **P/E RATIO** 20.2 (Trailing: 22.0 Median: 16.0) **RELATIVE P/E RATIO** 1.06 **DIV'D YLD** 2.8% **VALUE LINE**

TIMELINESS 2 Raised 6/10/16
SAFETY 1 Raised 9/15/06
TECHNICAL 1 Raised 8/19/16
BETA .80 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	30	(-10%)	*Nil*
Low	25	(-25%)	*-4%*

Insider Decisions

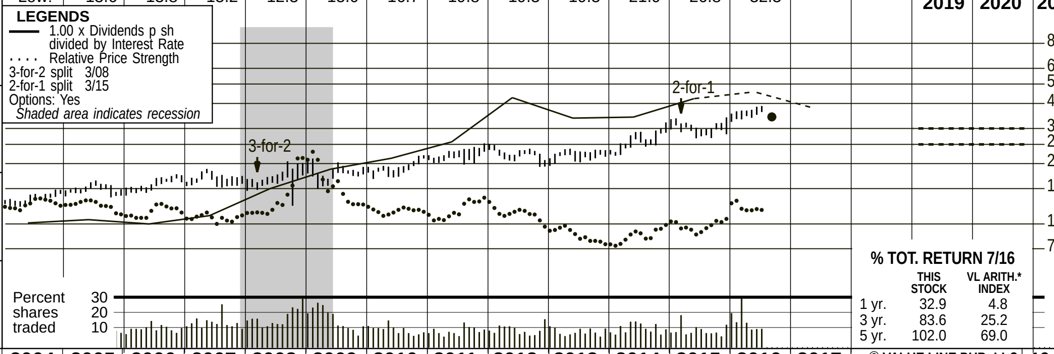
	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	7	6	7	6	0	0	0	0	0
to Sell	0	0	0	0	0	4	0	1	0

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	105	117	114
to Sell	103	94	114
Hld's(000)	49793	49713	51216

High:	16.4	17.7	18.8	20.6	21.2	22.0	25.2	25.1	23.8	32.1	34.1	38.9
Low:	13.6	13.8	15.2	12.3	15.0	16.7	19.8	19.3	19.5	21.9	26.8	32.3

Target Price Range
2019 | 2020 | 2021



% TOT. RETURN 7/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	32.9	4.8
3 yr.	83.6	25.2
5 yr.	102.0	69.0

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
14.71	25.61	22.06	31.14	30.44	38.10	39.81	36.31	45.37	31.17	32.05	36.30	27.08	38.38	44.40	32.09	*20.95*	*26.15*	Revenues per sh [A]	*28.60*
1.00	1.06	1.07	1.19	1.25	1.31	1.37	1.22	1.81	1.58	1.63	1.70	1.86	1.93	2.73	2.52	*2.35*	*2.55*	"Cash Flow" per sh	*2.65*
.60	.65	.70	.79	.85	.88	.93	.78	1.35	1.20	1.23	1.29	1.36	1.37	2.08	1.78	*1.60*	*1.80*	Earnings per sh [B]	*1.85*
.38	.39	.40	.41	.43	.45	.48	.51	.56	.62	.68	.72	.77	.81	.86	.93	*.96*	*.98*	Div'ds Decl'd per sh [C]■	*1.02*
.62	.55	.51	.57	.72	.64	.64	.73	.86	.90	1.05	1.13	1.26	1.33	1.52	3.76	*1.70*	*1.75*	Cap'l Spending per sh	*1.80*
4.14	4.40	4.35	5.13	5.62	5.30	7.50	7.75	8.64	8.29	8.81	9.36	9.80	10.65	11.48	12.99	*13.80*	*14.65*	Book Value per sh [D]	*17.15*
79.17	79.99	83.00	81.70	83.22	82.64	82.88	83.22	84.12	83.17	82.35	82.89	83.05	83.32	84.20	85.19	*86.00*	*86.00*	Common Shs Outst'g [E]	*86.00*
14.7	14.2	14.7	14.0	15.3	16.8	16.1	21.6	12.3	14.9	15.0	16.8	16.8	16.0	11.7	16.6	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.0*
.96	.73	.80	.80	.81	.89	.87	1.15	.74	.99	.95	1.05	1.07	.90	.62	.84			Relative P/E Ratio	*.90*
4.4%	4.2%	3.9%	3.7%	3.3%	3.1%	3.2%	3.0%	3.3%	3.5%	3.7%	3.3%	3.4%	3.7%	3.5%	3.1%			Avg Ann'l Div'd Yield	*3.5%*

CAPITAL STRUCTURE as of 6/30/16
Total Debt $1223.8 mill. **Due in 5 Yrs** $321.9 mill.
LT Debt $967.8 mill. **LT Interest** $25.4 mill.
Incl. $53.2 mill. capitalized leases.
(LT interest earned: 7.5x; total interest coverage: 7.5x)
Pension Assets-9/15 $256.4 mill. **Oblig.** $394.4 mill.
Pfd Stock None

Common Stock 86,150,280 shs. **as of 8/1/16**
MARKET CAP: $3.0 billion (Mid Cap)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		19-21
3299.6	3021.8	3816.2	2592.5	2639.3	3009.2	2248.9	3198.1	3738.1	2734.0	*1800*	*2250*	Revenues ($mill) [A]	*2460*
78.5	65.3	113.9	101.0	101.8	106.5	112.4	113.7	176.9	153.7	*140*	*155*	Net Profit ($mill)	*160*
38.9%	38.8%	37.8%	27.1%	41.4%	30.2%	7.1%	25.4%	30.2%	26.3%	*32.0%*	*32.0%*	Income Tax Rate	*32.0%*
2.4%	2.2%	3.0%	3.9%	3.9%	3.5%	5.0%	3.6%	4.7%	5.6%	*7.7%*	*6.9%*	Net Profit Margin	*6.5%*
34.8%	37.3%	38.5%	39.8%	37.2%	35.5%	39.2%	36.6%	38.2%	43.2%	*43.0%*	*43.0%*	Long-Term Debt Ratio	*40.5%*
65.2%	62.7%	61.5%	60.2%	62.8%	64.5%	60.8%	63.4%	61.8%	56.8%	*57.0%*	*57.0%*	Common Equity Ratio	*59.5%*
954.0	1028.0	1182.1	1144.8	1154.4	1203.1	1339.0	1400.3	1564.4	1950.6	*2090*	*2210*	Total Capital ($mill)	*2475*
934.9	970.9	1017.3	1064.4	1135.7	1295.9	1484.9	1643.1	1884.1	2128.3	*2170*	*2215*	Net Plant ($mill)	*2350*
9.6%	7.7%	10.7%	9.7%	9.7%	9.7%	9.2%	9.0%	12.1%	8.6%	*7.5%*	*8.0%*	Return on Total Cap'l	*7.5%*
12.6%	10.1%	15.7%	14.6%	14.0%	13.7%	13.8%	12.8%	18.3%	13.9%	*11.5%*	*12.5%*	Return on Shr. Equity	*11.0%*
12.6%	10.1%	15.7%	14.6%	14.0%	13.7%	13.8%	12.8%	18.3%	13.9%	*11.5%*	*12.5%*	Return on Com Equity	*11.0%*
6.3%	3.6%	9.5%	7.2%	6.7%	6.2%	6.2%	5.2%	11.0%	6.8%	*4.5%*	*5.5%*	Retained to Com Eq	*4.5%*
50%	64%	40%	50%	52%	55%	55%	59%	40%	50%	*60%*	*54%*	All Div'ds to Net Prof	*55%*

CURRENT POSITION ($MILL.)	2014	2015	6/30/16
Cash Assets	2.2	4.9	94.8
Other	680.5	539.6	509.9
Current Assets	682.7	544.5	604.7
Accts Payable	330.3	273.2	216.0
Debt Due	335.5	77.5	256.0
Other	125.3	85.4	129.5
Current Liab.	791.1	436.1	601.5
Fix. Chg. Cov.	1007%	750%	750%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	1.5%	1.0%	*-5.0%*
"Cash Flow"	6.5%	7.5%	*1.5%*
Earnings	7.5%	6.5%	*1.0%*
Dividends	7.0%	7.0%	*3.0%*
Book Value	8.0%	6.5%	*6.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) [A] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2013	736.0	960.9	767.5	733.7	3198.1
2014	878.4	1579.6	688.3	591.9	3738.2
2015	824.1	1013.1	458.5	438.3	2734.0
2016	444.3	574.2	393.2	*388.3*	*1800*
2017	*550*	*690*	*510*	*500*	*2250*

Fiscal Year Ends	EARNINGS PER SHARE [A B] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2013	.43	.82	.12	d.01	1.37
2014	.47	1.79	.05	d.23	2.08
2015	.65	1.16	.03	d.06	1.78
2016	.58	.91	.13	*d.02*	*1.60*
2017	*.63*	*.96*	*.20*	*.01*	*1.80*

Cal-endar	QUARTERLY DIVIDENDS PAID [C]■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.19	.19	.19	.40	.97
2013	- -	.20	.20	.20	.60
2014	.21	.21	.21	.23	.86
2015	.23	.23	.23	.24	.93
2016	.24	.24	.24		

BUSINESS: New Jersey Resources Corp. is a holding company providing retail/wholesale energy svcs. to customers in New Jersey, and in states from the Gulf Coast to New England, and Canada. New Jersey Natural Gas had about 512,300 customers at 9/30/15 in Monmouth and Ocean Counties, and other N.J. Counties. Fiscal 2015 volume: 341 bill. cu. ft. (14% interruptible, 21% residential and commercial and electric utility, 65% incentive programs). N.J. Natural Energy subsidiary provides unregulated retail/wholesale natural gas and related energy svcs. 2015 dep. rate: 2.5%. Has 991 empls. Off./dir. own about 1.4% of common (12/15 Proxy). Chrmn., CEO & Pres.: Laurence M. Downes. Inc.: NJ Addr.: 1415 Wyckoff Road, Wall, NJ 07719. Tel.: 732-938-1480. Web: www.njresources.com.

New Jersey Resources posted mixed financial results for the June quarter. Revenues declined 14.2% on a year-over-year basis. This reflected a 19.9% downturn in non-utility volumes, partially offset by a 2.5% rise in utility volumes. The New Jersey Natural Gas (NJNG) regulated utility segment added 5,289 new customers during the first nine months of the year. Despite this increase in active customer meters, the downturn in natural gas prices resulted in that segment posting reduced top-line contributions. Meanwhile, on the profitability front, total operating expenses increased 520 basis points as a percentage of revenues. On the upside, other income and an income tax benefit helped to boost the bottom line. After excluding unrealized losses on derivatives NJR's third-quarter earnings rose more than threefold, to $0.13 a share. This was modestly below our earlier call of $0.15, but still represented a healthy improvement over 2015's easy comparison.

That said, we have left our 2016 and 2017 earnings estimates unchanged at $1.60 and $1.80, respectively. The NJNG regulated utility division is anticipated to add approximately 8,150 new customers this year. Assuming that business develops as planned, this should equate to roughly 24,000-28,000 additional active meters over the period from 2016-2018. However, the reduction in natural gas prices will likely be a primary detractor for this year's bottom line. Over the longer time frame, an active capital growth project program will likely take some time to bear fruit.

These shares have improved one notch in Timeliness, to 2 (Above Average). This suggests NJR will outpace the broader market averages in the coming year and may appeal to momentum accounts. However, the stock's quotation is trading above our Target Price Range, making it an unsuitable choice for the long term. From a fundamental standpoint, it is also trading at a somewhat rich price-to-earnings multiple, especially for a utility. Finally, when compared to other stocks in this industry, New Jersey Resources' dividend yield is a bit light. As a result, we think these shares are best-suited for short-term investors.

Bryan J. Fong *September 2, 2016*

(A) Fiscal year ends Sept. 30th.
(B) Diluted earnings. Qtly egs may not sum to total due to change in shares outstanding. Next earnings report due late Oct.
(C) Dividends historically paid in early Jan., April, July, and October. 1Q '13 div'd paid in 4Q '12. ■ Dividend reinvestment plan available.
(D) Includes regulatory assets in 2015: $410.2 million, $4.82/share.
(E) In millions, adjusted for splits.

Company's Financial Strength	A+
Stock's Price Stability	85
Price Growth Persistence	55
Earnings Predictability	60

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N.W. NAT'L GAS NYSE-NWN

RECENT PRICE 61.52 **P/E RATIO** 27.7 (Trailing: 27.5 Median: 18.0) **RELATIVE P/E RATIO** 1.45 **DIV'D YLD** 3.0% **VALUE LINE**

TIMELINESS	3	Lowered 8/12/16
SAFETY	1	Raised 3/18/05
TECHNICAL	1	Raised 8/26/16

BETA .65 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(Nil)	3%
Low	50	(-20%)	-1%

Insider Decisions

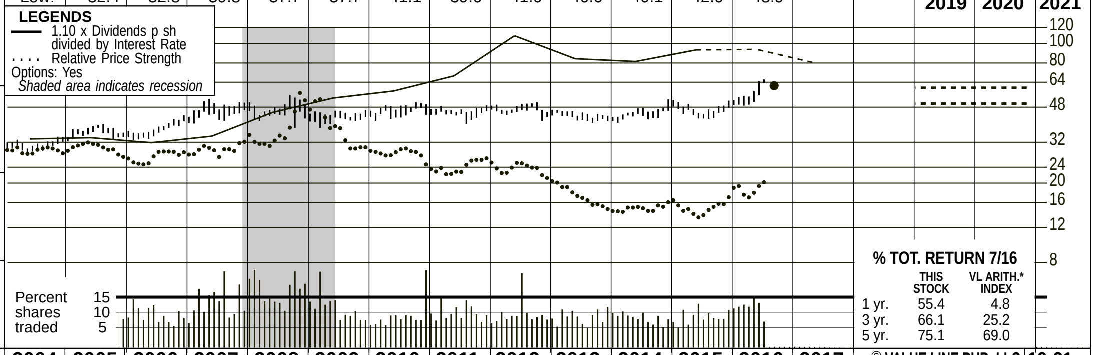
	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	0	3	0	4	12	3	0	4	6
to Sell	0	4	1	0	0	4	0	2	7

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	69	81	98
to Sell	74	65	65
Hld's(000)	16793	16813	15946

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
High:	39.6	43.7	52.8	55.2	46.5	50.9	49.0	50.8	46.6	52.6	52.3	66.2
Low:	32.4	32.8	39.8	37.7	37.7	41.1	39.6	41.0	40.0	40.1	42.0	48.9

Target Price Range 2019 2020 2021



% TOT. RETURN 7/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	55.4	4.8
3 yr.	66.1	25.2
5 yr.	75.1	69.0

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
21.09	25.78	25.07	23.57	25.69	33.01	37.20	39.13	39.16	38.17	30.56	31.72	27.14	28.02	27.64	26.39	*25.23*	*26.80*	Revenues per sh	*31.80*
3.68	3.86	3.65	3.85	3.92	4.34	4.76	5.41	5.31	5.20	5.18	5.00	4.94	5.04	5.05	4.91	*4.70*	*5.00*	"Cash Flow" per sh	*6.35*
1.79	1.88	1.62	1.76	1.86	2.11	2.35	2.76	2.57	2.83	2.73	2.39	2.22	2.24	2.16	1.96	*2.20*	*2.35*	Earnings per sh A	*3.15*
1.24	1.25	1.26	1.27	1.30	1.32	1.39	1.44	1.52	1.60	1.68	1.75	1.79	1.83	1.85	1.86	*1.87*	*1.88*	Div'ds Decl'd per sh B■	*2.05*
3.46	3.23	3.11	4.90	5.52	3.48	3.56	4.48	3.92	5.09	9.35	3.76	4.91	5.13	4.40	4.37	*4.70*	*6.45*	Cap'l Spending per sh	*6.80*
17.93	18.56	18.88	19.52	20.64	21.28	22.01	22.52	23.71	24.88	26.08	26.70	27.23	27.77	28.12	28.47	*28.70*	*29.55*	Book Value per sh D	*32.85*
25.23	25.23	25.59	25.94	27.55	27.58	27.24	26.41	26.50	26.53	26.58	26.76	26.92	27.08	27.28	27.43	*27.75*	*28.00*	Common Shs Outst'g C	*28.00*
12.4	12.9	17.2	15.8	16.7	17.0	15.9	16.7	18.1	15.2	17.0	19.0	21.1	19.4	20.7	23.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.0*
.81	.66	.94	.90	.88	.91	.86	.89	1.09	1.01	1.08	1.19	1.34	1.09	1.09	1.19			Relative P/E Ratio	*1.05*
5.6%	5.1%	4.5%	4.6%	4.2%	3.7%	3.7%	3.1%	3.3%	3.7%	3.6%	3.9%	3.8%	4.2%	4.1%	4.0%			Avg Ann'l Div'd Yield	*3.7%*

CAPITAL STRUCTURE as of 6/30/16
Total Debt $747.9 mill. **Due in 5 Yrs** $360.0 mill.
LT Debt $570.1 mill. **LT Interest** $45.0 mill.

(Total interest coverage: 3.5x)

Pension Assets-12/15 $249.4 mill. **Oblig.** $445.6 mill.

Pfd Stock None

Common Stock 27,550,206 shares as of 7/22/16

MARKET CAP $1.7 billion (Mid Cap)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		19-21
1013.2	1033.2	1037.9	1012.7	812.1	848.8	730.6	758.5	754.0	723.8	*700*	*750*	Revenues ($mill)	*890*
65.2	74.5	68.5	75.1	72.7	63.9	59.9	60.5	58.7	53.7	*61.0*	*66.0*	Net Profit ($mill)	*88.0*
36.3%	37.2%	36.9%	38.3%	40.5%	40.4%	42.4%	40.8%	41.5%	40.0%	*40.0%*	*39.0%*	Income Tax Rate	*39.0%*
6.4%	7.2%	6.6%	7.4%	8.9%	7.5%	8.2%	8.0%	7.8%	7.4%	*8.7%*	*8.8%*	Net Profit Margin	*9.9%*
46.3%	46.3%	44.9%	47.7%	46.1%	47.3%	48.5%	47.6%	44.8%	42.5%	*43.0%*	*43.0%*	Long-Term Debt Ratio	*43.0%*
53.7%	53.7%	55.1%	52.3%	53.9%	52.7%	51.5%	52.4%	55.2%	57.5%	*57.0%*	*57.0%*	Common Equity Ratio	*57.0%*
1116.5	1106.8	1140.4	1261.8	1284.8	1356.2	1424.7	1433.6	1389.0	1357.7	*1395*	*1445*	Total Capital ($mill)	*1605*
1425.1	1495.9	1549.1	1670.1	1854.2	1893.9	1973.6	2062.9	2121.6	2182.7	*2270*	*2360*	Net Plant ($mill)	*2655*
7.1%	8.5%	7.7%	7.3%	7.0%	6.2%	5.7%	5.8%	5.8%	5.5%	*5.5%*	*5.5%*	Return on Total Cap'l	*6.5%*
10.9%	12.5%	10.9%	11.4%	10.5%	8.9%	8.2%	8.1%	7.6%	6.9%	*7.5%*	*8.0%*	Return on Shr. Equity	*9.5%*
10.9%	12.5%	10.9%	11.4%	10.5%	8.9%	8.2%	8.1%	7.6%	6.9%	*7.5%*	*8.0%*	Return on Com Equity	*9.5%*
4.5%	6.0%	4.5%	5.0%	4.0%	2.4%	1.6%	1.5%	1.1%	.6%	*1.0%*	*1.0%*	Retained to Com Eq	*3.5%*
59%	52%	59%	56%	61%	73%	80%	81%	85%	92%	*85%*	*80%*	All Div'ds to Net Prof	*65%*

CURRENT POSITION ($MILL.)	**2014**	**2015**	**6/30/16**
Cash Assets	9.5	4.2	5.5
Other	353.1	327.9	196.6
Current Assets	362.6	332.1	202.1
Accts Payable	91.4	73.2	57.8
Debt Due	274.7	295.0	177.8
Other	103.3	109.5	78.0
Current Liab.	469.4	477.7	313.6
Fix. Chg. Cov.	321%	300%	352%

ANNUAL RATES of change (per sh)	**Past 10 Yrs.**	**Past 5 Yrs.**	**Est'd '13-'15 to '19-'21**
Revenues	- -	-5.5%	*2.5%*
"Cash Flow"	2.0%	-1.0%	*4.0%*
Earnings	1.0%	-5.0%	*7.0%*
Dividends	3.5%	3.0%	*2.0%*
Book Value	3.0%	2.5%	*2.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	277.9	131.7	88.2	260.7	758.5
2014	293.4	133.1	87.2	240.3	754.0
2015	261.7	138.3	93.1	230.7	723.8
2016	255.5	99.2	*95.0*	*250.3*	*700*
2017	*260*	*135*	*90.0*	*265*	*750*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	1.40	.08	d.31	1.07	2.24
2014	1.40	.04	d.32	1.04	2.16
2015	1.04	.08	d.24	1.08	1.96
2016	1.33	.07	*d.30*	*1.10*	*2.20*
2017	*1.35*	*.10*	*d.25*	*1.15*	*2.35*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.445	.445	.445	.455	1.79
2013	.455	.455	.455	.460	1.83
2014	.460	.460	.460	.465	1.85
2015	.465	.465	.465	.4675	1.86
2016	.4675	.4675	.4675		

BUSINESS: Northwest Natural Gas Co. distributes natural gas to 90 communities, 704,000 customers, in Oregon (89% of customers) and in southwest Washington state. Principal cities served: Portland and Eugene, OR; Vancouver, WA. Service area population: 2.5 mill. (77% in OR). Company buys gas supply from Canadian and U.S. producers; has transportation rights on Northwest Pipeline system. Owns local underground storage. Rev. breakdown: residential, 35%; commercial, 22%; industrial, gas transportation, and other, 43%. Employs 1,092. BlackRock Inc. owns 10.0% of shares; officers and directors, 2.1% (4/16 proxy). CEO: Gregg S. Kantor. Inc.: Oregon. Address: 220 NW 2nd Ave., Portland, OR 97209. Telephone: 503-226-4211. Internet: www.nwnatural.com.

Northwest Natural Gas reported steady second-quarter results. Earnings per share were mostly flat at $0.07, as the company benefited from decent customer growth and better gas storage results. Indeed, storage income increased $1.5 million year over year. Still, these factors were more than offset by a 7% decrease in natural gas volumes, which was caused by 22% warmer temperatures year over year, though a weather normalization mechanism helped somewhat. As we think the company will have decent second-half results, we have raised our 2016 earnings-per-share estimate by a dime to $2.20 a share.

The near-term picture is benefiting from solid meter additions in Portland. Indeed, total customer growth was 1.5% during the quarter, and the company should continue to benefit from housing starts in the area, with permits up 21% year over year. This should allow for better volumes in the years ahead. In addition, the higher usage of natural gas to power appliances is boosting overall demand.

Meanwhile, the Mist storage expansion project continues to make progress. The company's plan to provide storage services to PGE generating plants has received approval from regulatory boards, and the company is now working with Portland General Electric to evaluate construction project bids. The ultimate goal is the creation of facilities to handle 2.5 billion cubic feet of ready-to-use natural gas storage and a new pipeline. These are expected to be put into service in the winter of 2018-2019. This should allow for much higher long-term volumes and better earnings, which we think can reach $3.15 a share by decade's end.

Shares of Northwest Natural Gas are not appealing at the recent quotation. The shares have run up in price over the past three months, which has led them to trade above our long-term Target Price Range. Too, this caused the dividend yield to become less compelling, and the stock's P/E ratio to reach an unusually high level. Also, the payout is expected to be raised at a low rate over the long haul. Income-seekers would be best served looking elsewhere.

John E. Seibert III *September 2, 2016*

(A) Diluted earnings per share. Excludes nonrecurring items: '00, $0.11; '06, ($0.06); '08, ($0.03); '09, 6¢; May not sum due to rounding. Next earnings report due in early November.

(B) Dividends historically paid in mid-February, May, August, and November.
■ Dividend reinvestment plan available.
(C) In millions.

(D) Includes intangibles. In 2015: $370.7 million, $13.52/share.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	25
Earnings Predictability	90

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SOUTH JERSEY INDS. NYSE-SJI

RECENT PRICE	P/E RATIO	(Trailing / Median)	RELATIVE P/E RATIO	DIV'D YLD
30.52	23.1	Trailing: 20.8 Median: 17.0	1.21	3.6%

VALUE LINE

TIMELINESS 1 Raised 8/26/16
SAFETY 2 Lowered 1/4/91
TECHNICAL 2 Lowered 9/2/16
BETA .80 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	35	(+15%)	7%
Low	25	(-20%)	-1%

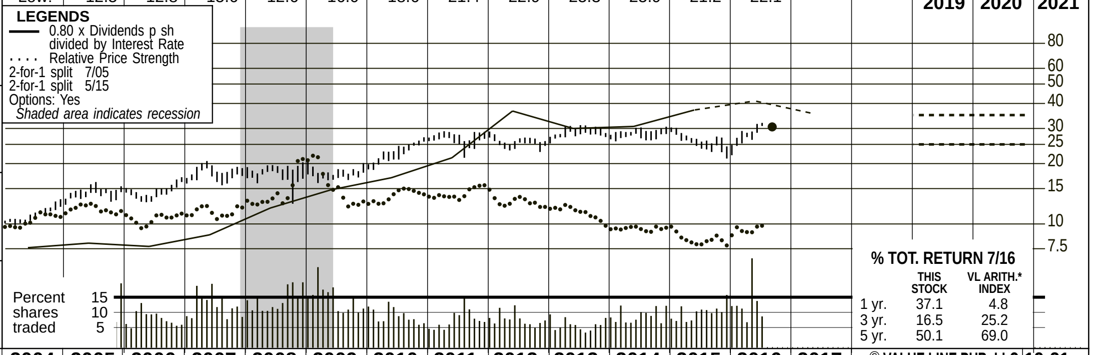
Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	9	0	9	0	0	1
to Sell	0	0	0	0	0	1	1	0	0

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	105	105	109
to Sell	59	72	77
Hld's(000)	42947	43333	46585

High:	16.2	17.1	20.6	20.3	20.4	27.1	29.0	29.0	31.1	30.6	30.4	32.0
Low:	12.5	12.8	15.6	12.6	16.0	18.6	21.4	22.9	25.3	25.9	21.2	22.1



% TOT. RETURN 7/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	37.1	4.8
3 yr.	16.5	25.2
5 yr.	50.1	69.0

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
11.22	17.65	10.35	13.17	14.75	15.89	15.88	16.15	16.18	14.19	15.48	13.71	11.16	11.18	12.98	13.52	*11.55*	*12.20*	Revenues per sh	*15.10*
.97	.95	1.06	1.12	1.22	1.25	1.75	1.60	1.74	1.86	2.10	2.23	2.34	2.48	2.67	2.42	*2.30*	*2.45*	"Cash Flow" per sh	*2.95*
.54	.57	.61	.68	.79	.86	1.23	1.05	1.14	1.19	1.35	1.45	1.52	1.52	1.57	1.44	*1.32*	*1.40*	Earnings per sh A	*1.80*
.37	.37	.38	.39	.41	.43	.46	.51	.56	.61	.68	.75	.83	.90	.96	1.02	*1.08*	*1.15*	Div'ds Decl'd per sh B ■	*1.40*
1.11	1.41	1.74	1.18	1.34	1.60	1.26	.94	1.04	1.83	2.79	3.20	4.01	4.84	5.01	4.87	*3.50*	*3.95*	Cap'l Spending per sh	*5.10*
3.62	3.91	4.84	5.63	6.20	6.75	7.55	8.12	8.67	9.12	9.54	10.33	11.63	12.64	13.65	14.62	*16.90*	*18.30*	Book Value per sh C	*21.50*
46.00	47.44	48.83	52.92	55.52	57.96	58.65	59.22	59.46	59.59	59.75	60.43	63.31	65.43	68.33	70.97	*80.00*	*82.00*	Common Shs Outst'g D	*86.00*
13.0	13.6	13.5	13.3	14.1	16.6	11.9	17.2	15.9	15.0	16.8	18.4	16.9	18.9	18.0	17.9	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.0*
.85	.70	.74	.76	.74	.88	.64	.91	.96	1.00	1.07	1.15	1.08	1.06	.95	.90			Relative P/E Ratio	*1.00*
5.2%	4.7%	4.6%	4.3%	3.7%	3.0%	3.2%	2.8%	3.1%	3.4%	3.0%	2.8%	3.2%	3.1%	3.4%	3.9%			Avg Ann'l Div'd Yield	*4.9%*
						931.4	956.4	962.0	845.4	925.1	828.6	706.3	731.4	887.0	959.6	*925*	*1000*	Revenues ($mill)	*1300*
						72.0	61.8	67.7	71.3	81.0	87.0	93.3	97.1	104.0	99.0	*100*	*112*	Net Profit ($mill)	*150*
						41.3%	41.9%	47.7%	23.0%	15.2%	22.4%	10.8%	- -	10.8%	5.9%	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
						7.7%	6.5%	7.0%	8.4%	8.8%	10.5%	13.2%	13.3%	11.7%	10.3%	*10.8%*	*11.2%*	Net Profit Margin	*11.5%*
						44.7%	42.7%	39.2%	36.5%	37.4%	40.5%	45.0%	45.1%	48.0%	49.2%	*41.5%*	*42.5%*	Long-Term Debt Ratio	*45.0%*
						55.3%	57.3%	60.8%	63.5%	62.6%	59.5%	55.0%	54.9%	52.0%	50.8%	*58.5%*	*57.5%*	Common Equity Ratio	*55.0%*
						801.1	839.0	848.0	856.4	910.1	1048.3	1337.6	1507.4	1791.9	2043.9	*2300*	*2600*	Total Capital ($mill)	*3350*
						920.0	948.9	982.6	1073.1	1193.3	1352.4	1578.0	1859.1	2134.1	2448.1	*2550*	*2650*	Net Plant ($mill)	*2950*
						10.1%	8.6%	8.9%	9.0%	9.5%	8.9%	7.4%	6.8%	6.4%	5.4%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.0%*
						16.3%	12.8%	13.1%	13.1%	14.2%	13.9%	12.7%	11.7%	11.2%	9.5%	*7.5%*	*7.5%*	Return on Shr. Equity	*8.0%*
						16.3%	12.8%	13.1%	13.1%	14.2%	13.9%	12.7%	11.7%	11.2%	9.5%	*7.5%*	*7.5%*	Return on Com Equity	*8.0%*
						10.2%	6.7%	6.7%	6.4%	7.1%	6.7%	5.8%	4.8%	4.3%	2.8%	*1.0%*	*1.0%*	Retained to Com Eq	*1.5%*
						37%	48%	49%	51%	50%	52%	55%	59%	61%	71%	*86%*	*84%*	All Div'ds to Net Prof	*80%*

CAPITAL STRUCTURE as of 6/30/16
Total Debt $1221.1 mill. **Due in 5 Yrs** $1140 mill.
LT Debt $831.1 mill. **LT Interest** $25.0 mill.
(Total interest coverage: 5.1x)

Leases, Uncapitalized Annual rentals $.8 mill.
Pension Assets-12/15 $184.8 mill. **Oblig.** $254.2 mill.

Pfd Stock None

Common Stock 79,477,822 shs. **as of 8/1/16**

MARKET CAP: $2.4 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2014	2015	6/30/16
Cash Assets	4.2	3.9	4.2
Other	562.5	427.4	371.6
Current Assets	566.7	431.3	375.8
Accts Payable	273.0	186.4	166.4
Debt Due	395.6	461.2	390.0
Other	181.6	184.9	202.0
Current Liab.	850.2	832.5	758.4
Fix. Chg. Cov.	432%	496%	475%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	-1.5%	-4.0%	*3.0%*
"Cash Flow"	7.5%	6.0%	*2.5%*
Earnings	7.0%	4.0%	*3.0%*
Dividends	9.0%	9.5%	*6.5%*
Book Value	8.0%	8.5%	*8.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	255.6	122.6	128.8	224.4	731.4
2014	350.2	133.3	122.4	281.1	887.0
2015	383.0	177.7	141.1	257.8	959.6
2016	333.0	154.4	*150*	*287.6*	*925*
2017	*350*	*170*	*160*	*320*	*1000*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	.76	.16	d.02	.62	1.52
2014	1.01	.15	d.05	.47	1.57
2015	.86	.03	d.07	.62	1.44
2016	.80	.12	*d.10*	*.50*	*1.32*
2017	*.80*	*.10*	*d.06*	*.56*	*1.40*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	- -	.202	.202	.423	.83
2013	- -	.222	.222	.458	.90
2014	- -	.237	.237	.488	.96
2015	- -	.251	.251	.515	1.02
2016	- -	.264	.264		

BUSINESS: South Jersey Industries, Inc. is a holding company. Its subsidiary, South Jersey Gas Co., distributes natural gas to 373,100 customers in New Jersey's southern counties. Gas revenue mix '15: residential, 45%; commercial, 22%; cogeneration and electric generation, 12%; industrial, 21%. Non-utility operations include: South Jersey Energy, South Jersey Resources Group, South Jersey Exploration, Marina Energy, South Jersey Energy Service Plus, and SJI Midstream. Has about 720 employees. Off./dir. own less than 1% of common shares; BlackRock, Inc., 10.5%; The Vanguard Group, Inc., 7.7% (3/16 proxy). Pres. & CEO: Michael J. Renna. Inc.: NJ. Address: 1 South Jersey Plaza, Folsom, NJ 08037. Tel.: 609-561-9000. Internet: www.sjindustries.com.

Shares of South Jersey Industries have come off an all-time high price lately. The company reported mixed results for the second quarter. The top line declined roughly 13%, on a year-over-year basis. The bottom-line picture was more favorable, with earnings per share of $0.12 advancing considerably from the prior-year period. This was largely due to improved operating performance at the energy production business, South Jersey Energy Services. Modest customer growth supported results at mainstay utility South Jersey Gas.

We expect unfavorable bottom-line comparisons in the third and fourth quarters, and lower earnings per share for the current year. A reduction in solar investments ought to produce a much lower contribution to earnings from investment tax credits going forward. On the bright side, we do envision healthy bottom-line improvement from 2017 onward. The addition of several fuel supply management contracts ought to benefit performance at the wholesale and retail commodity business, South Jersey Energy Group. The Energy Services division will likely perform well, too, and the company's interest in the PennEast pipeline should contribute to earnings growth. Elsewhere, prospects for the utility look fairly attractive. Natural gas remains the fuel of choice within its service territory. This business will probably continue to benefit from customer conversions to natural gas, considering its cost effectiveness compared with alternatives. Customer additions and significant infrastructure investment ought to drive earnings growth over the long haul.

This stock is ranked to outperform the broader market averages for the coming six to 12 months. Moreover, we envision healthy operating improvement for the company over the pull to late decade. However, the pluses look to be largely reflected in the recent quotation, and appreciation potential appears fairly limited for the pull to 2019-2021. Even so, income-seeking accounts may find the stock's healthy dividend yield attractive. Also, South Jersey earns high marks for Safety, Financial Strength, Price Stability, and Earnings Predictability.

Michael Napoli, CFA *September 2, 2016*

(A) Based on GAAP egs. through 2006, economic egs. thereafter. GAAP EPS: '07, $1.05; '08, $1.29; '09, $0.97; '10, $1.11; '11, $1.49; '12, $1.49; '13, $1.28; '14, $1.46; '15, $1.52. Excl. nonrecur. gain (loss): '01, $0.07; '08, $0.16; '09, ($0.22); '10, ($0.24); '11, $0.04; '12, ($0.03); '13, ($0.24); '14, ($0.11); '15, $0.08. Egs. may not sum due to rounding. Next egs. report due early Nov. **(B)** Div'ds paid early April, July, Oct., and late Dec. ■ Div. reinvest. plan avail. **(C)** Incl. reg. assets. In 2015: $521.0 mill., $7.34 per shr. **(D)** In mill., adj. for split.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	40
Earnings Predictability	80

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SPIRE INC. NYSE-SR

RECENT PRICE 66.63 | **P/E RATIO** 19.8 (Trailing: 20.8 Median: 14.0) | **RELATIVE P/E RATIO** 1.04 | **DIV'D YLD** 2.9% | **VALUE LINE**

TIMELINESS 3 Lowered 8/12/16
SAFETY 2 Raised 6/20/03
TECHNICAL 2 Lowered 9/2/16
BETA .70 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	75	(+15%)	6%
Low	55	(-15%)	-1%

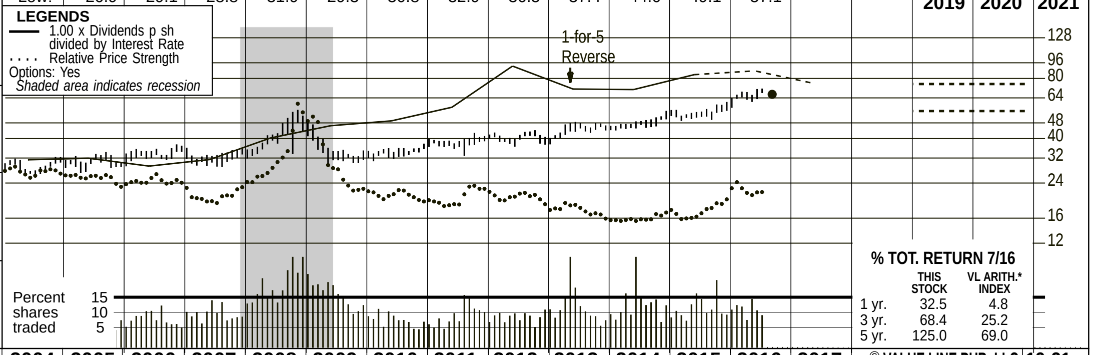
Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	1	0	6	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	102	114	109
to Sell	95	86	104
Hld's(000)	35808	34753	35632

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
High:	34.3	37.5	36.0	55.8	48.3	37.8	42.8	44.0	48.5	55.2	61.0	71.2
Low:	26.9	29.1	28.8	31.9	29.3	30.8	32.9	36.5	37.4	44.0	49.1	57.1



% TOT. RETURN 7/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	32.5	4.8
3 yr.	68.4	25.2
5 yr.	125.0	69.0

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
29.99	53.08	39.84	54.95	59.59	75.43	93.51	93.40	100.44	85.49	77.83	71.48	49.90	31.10	37.68	45.59	*35.85*	*40.45*	Revenues per sh A	*53.00*
2.68	3.00	2.56	3.15	2.79	2.98	3.81	3.87	4.22	4.56	4.11	4.62	4.58	3.12	3.87	6.15	*6.10*	*6.55*	"Cash Flow" per sh	*7.40*
1.37	1.61	1.18	1.82	1.82	1.90	2.37	2.31	2.64	2.92	2.43	2.86	2.79	2.02	2.35	3.16	*3.25*	*3.50*	Earnings per sh A B	*4.20*
1.34	1.34	1.34	1.34	1.35	1.37	1.40	1.45	1.49	1.53	1.57	1.61	1.66	1.70	1.76	1.84	*1.93*	*1.97*	Div'ds Decl'd per sh C■	*2.20*
2.77	2.51	2.80	2.67	2.45	2.84	2.97	2.72	2.57	2.36	2.56	3.02	4.83	4.00	3.96	6.68	*6.85*	*6.90*	Cap'l Spending per sh	*7.10*
14.99	15.26	15.07	15.65	16.96	17.31	18.85	19.79	22.12	23.32	24.02	25.56	26.67	32.00	34.93	36.30	*36.45*	*38.00*	Book Value per sh D	*42.70*
18.88	18.88	18.96	19.11	20.98	21.17	21.36	21.65	21.99	22.17	22.29	22.43	22.55	32.70	43.18	43.36	*46.00*	*47.00*	Common Shs Outst'g E	*48.00*
14.9	14.5	20.0	13.6	15.7	16.2	13.6	14.2	14.3	13.4	13.7	13.0	14.5	21.3	19.8	16.5	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.5*
.97	.74	1.09	.78	.83	.86	.73	.75	.86	.89	.87	.82	.92	1.20	1.04	.84			Relative P/E Ratio	*.95*
6.6%	5.7%	5.7%	5.4%	4.7%	4.4%	4.3%	4.4%	3.9%	3.9%	4.7%	4.3%	4.1%	4.0%	3.8%	3.5%			Avg Ann'l Div'd Yield	*3.5%*
						1997.6	2021.6	2209.0	1895.2	1735.0	1603.3	1125.5	1017.0	1627.2	1976.4	*1650*	*1900*	Revenues ($mill) A	*2650*
						50.5	49.8	57.6	64.3	54.0	63.8	62.6	52.8	84.6	136.9	*150*	*160*	Net Profit ($mill)	*210*
						32.5%	33.4%	31.3%	33.6%	33.4%	31.4%	29.6%	25.0%	27.6%	31.2%	*28.0%*	*28.0%*	Income Tax Rate	*30.0%*
						2.5%	2.5%	2.6%	3.4%	3.1%	4.0%	5.6%	5.2%	5.2%	6.9%	*9.1%*	*8.7%*	Net Profit Margin	*7.9%*
						49.5%	45.3%	44.4%	42.9%	40.5%	38.9%	36.1%	46.6%	55.1%	53.0%	*52.5%*	*52.0%*	Long-Term Debt Ratio	*51.5%*
						50.4%	54.6%	55.5%	57.1%	59.5%	61.1%	63.9%	53.4%	44.9%	47.0%	*47.5%*	*48.0%*	Common Equity Ratio	*48.5%*
						798.9	784.5	876.1	906.3	899.9	937.7	941.0	1959.0	3359.4	3345.1	*3535*	*3735*	Total Capital ($mill)	*4395*
						763.8	793.8	823.2	855.9	884.1	928.7	1019.3	1776.6	2759.7	2941.2	*3090*	*3245*	Net Plant ($mill)	*3755*
						8.4%	8.5%	8.1%	8.7%	7.4%	8.1%	7.9%	3.3%	3.1%	5.1%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.5%*
						12.5%	11.6%	11.8%	12.4%	10.1%	11.1%	10.4%	5.0%	5.6%	8.7%	*9.0%*	*9.0%*	Return on Shr. Equity	*10.0%*
						12.5%	11.6%	11.8%	12.4%	10.1%	11.1%	10.4%	5.0%	5.6%	8.7%	*9.0%*	*9.0%*	Return on Com Equity	*10.0%*
						5.1%	4.3%	5.2%	5.9%	3.6%	4.9%	4.3%	1.0%	1.5%	3.7%	*3.5%*	*4.0%*	Retained to Com Eq	*5.0%*
						59%	63%	56%	53%	64%	56%	59%	81%	73%	58%	*60%*	*57%*	All Div'ds to Net Prof	*50%*

CAPITAL STRUCTURE as of 6/30/16
Total Debt $1949.1 mill. **Due in 5 Yrs** $525.0 mill.
LT Debt $1851.5 mill. **LT Interest** $70.0 mill.
(Total interest coverage: 4.2x)

Leases, Uncapitalized Annual rentals $11.0 mill.
Pension Assets-9/15 $448.9 mill. **Oblig.** $652.3 mill.

Pfd Stock None
Common Stock 45,640,580 shs.
as of 7/29/16

MARKET CAP: $3.0 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2014	2015	6/30/16
Cash Assets	16.1	13.8	4.9
Other	588.8	516.3	448.5
Current Assets	604.9	530.1	453.4
Accts Payable	176.7	146.5	135.8
Debt Due	287.1	418.0	97.6
Other	319.0	289.3	258.4
Current Liab.	782.8	853.8	491.8
Fix. Chg. Cov.	360%	365%	421%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	-5.0%	-15.5%	*6.5%*
"Cash Flow"	4.0%	0.5%	*9.5%*
Earnings	3.0%	-1.0%	*9.0%*
Dividends	2.5%	3.0%	*3.5%*
Book Value	7.5%	8.0%	*4.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2013	307.0	397.6	165.3	147.1	1017.0
2014	468.6	694.5	241.8	222.3	1627.2
2015	619.6	877.4	275.2	204.2	1976.4
2016	399.4	609.3	249.3	*342*	*1650*
2017	*475*	*775*	*250*	*400*	*1900*

Fiscal Year Ends	EARNINGS PER SHARE A B F Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2013	1.14	1.34	.25	d.30	2.02
2014	1.09	1.59	.33	d.35	2.35
2015	1.09	2.18	.32	d.43	3.16
2016	1.08	2.31	.24	*d.38*	*3.25*
2017	*1.20*	*2.30*	*.30*	*d.30*	*3.50*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.415	.415	.415	.415	1.66
2013	.425	.425	.425	.425	1.70
2014	.44	.44	.44	.44	1.76
2015	.46	.46	.46	.46	1.84
2016	.49	.49	.49		

BUSINESS: Spire Inc., formerly known as the Laclede Group, Inc., is a holding company for natural gas utilities, which distributes natural gas across Missouri, including the cities of St. Louis and Kansas City. Has roughly 1.6 million customers. Acquired Missouri Gas 9/13, Alabama Gas Co 9/14. Utility therms sold and transported in fiscal 2015: 2.7 bill. Revenue mix for regulated operations: residential, 66%; commercial and industrial, 24%; transportation, 2%; other, 8%. Has around 3,078 employees. Officers and directors own 3.2% of common shares (1/16 proxy). Chairman: Edward Glotzbach; CEO: Suzanne Sitherwood. Inc.: Missouri. Address: 700 Market Street, St. Louis, Missouri 63101. Telephone: 314-342-0500. Internet: www.thelacledegroup.com.

Spire Inc. reported lackluster fiscal third-quarter results (ended June 30). Revenues dipped to $249.3 million, hurt by lower commodity prices but partially offset by higher volumes. Too, gas and marketing income retreated year over year. This led earnings per share to fall to $0.24. As we expect a higher share count and depressed commodity costs to weigh on fiscal fourth-quarter results, we have trimmed our fiscal 2016 full-year earnings-per-share estimate by $0.15, to $3.25.

The regulatory environment is causing some near-term concerns. The Office of Public Council has questioned the return on equity and the impact of Spire's pending acquisition of two gas utilities (more below) on Missouri customers. A negative outcome could cause customer givebacks. Meantime, Spire will file new rate cases for its Missouri Gas and Laclede Gas subsidiaries in April of 2017. These efforts should impact profitability.

The acquisitions of Mobile Gas and Willmut Gas appear to be on track. Spire will pay $344 million in order to gain the customer bases in Alabama and Mississippi; the deal is set to close by calendar yearend. The company has firmed up financing, including the sale of 2.2 million shares, which raised $138 million. Too, it has debt commitments lined up for $165 million on the transaction's completion. This deal should be earnings accretive in fiscal 2018, with cost synergies driving further gains thereafter.

Infrastructure builds should improve long-term earnings. The company has made progress on its Spire STL pipeline, which ought to lower distribution costs of natural gas and have higher allowable returns on equity. Infrastructure expenditures are expected to be above $1.8 billion over the next five years. With infrastructure replacement surcharges built into service contracts, Spire should benefit from better reliability.

Shares of Spire offer decent current income. An Above-Average Safety rank (2) adds appeal. Yet, although the yield is better than the industry mean, total return potential is limited, given that the shares are trading within our long-term Target Price Range. Most investors would do best waiting for a dip in price.

John E. Seibert III *September 2, 2016*

(A) Fiscal year ends Sept. 30th. (B) Based on diluted shares outstanding. Excludes nonrecurring loss: '06, 7¢. Excludes gain from discontinued operations: '08, 94¢. Next earnings report due late October. (C) Dividends historically paid in early January, April, July, and October. ■ Dividend reinvestment plan available. (D) Incl. deferred charges. In '14: $383.8 mill., $8.85/sh. (E) In millions. (F) Qtly. egs. may not sum due to rounding or change in shares outstanding.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	40
Earnings Predictability	85

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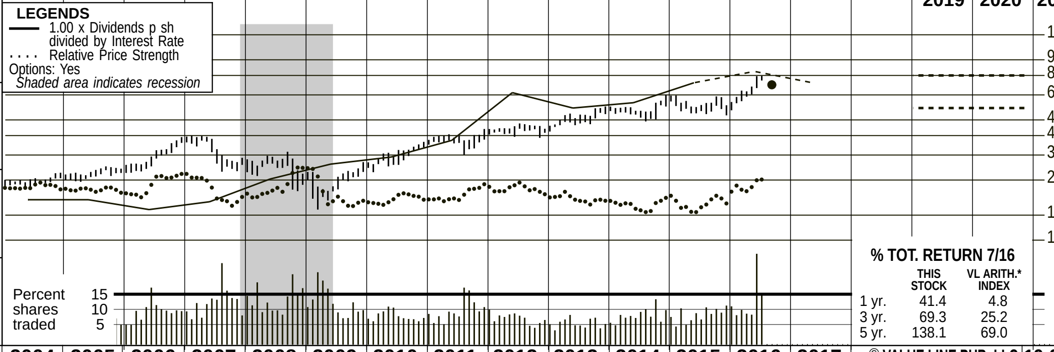
SOUTHWEST GAS NYSE-SWX

RECENT PRICE **71.95** | P/E RATIO **22.5** (Trailing: 23.6 Median: 16.0) | RELATIVE P/E RATIO **1.18** | DIV'D YLD **2.5%** | **VALUE LINE**

TIMELINESS 2 Lowered 9/2/16
SAFETY 3 Lowered 1/4/91
TECHNICAL 1 Raised 8/26/16
BETA .75 (1.00 = Market)

High:	28.1	39.4	39.9	33.3	29.5	37.3	43.2	46.1	56.0	64.2	63.7	79.6
Low:	23.5	26.0	26.5	21.1	17.1	26.3	32.1	39.0	42.0	47.2	50.5	53.5

Target Price Range
2019 2020 2021



2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(+10%)	*6%*
Low	55	(-25%)	*-3%*

Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	0	2	1	8	20	10	0	1	1
to Sell	0	2	1	0	0	9	0	3	5

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	109	99	108
to Sell	84	87	85
Hld's(000)	37243	37256	37942

% TOT. RETURN 7/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	41.4	4.8
3 yr.	69.3	25.2
5 yr.	138.1	69.0

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
32.61	42.98	39.68	35.96	40.14	43.59	48.47	50.28	48.53	42.00	40.18	41.07	41.77	42.08	45.61	52.00	***52.10***	***53.25***	**Revenues per sh**	***61.55***
4.57	4.79	5.07	5.11	5.57	5.20	5.97	6.21	5.76	6.16	6.46	6.81	7.73	8.24	8.47	8.62	***9.40***	***10.15***	**"Cash Flow" per sh**	***12.30***
1.21	1.15	1.16	1.13	1.66	1.25	1.98	1.95	1.39	1.94	2.27	2.43	2.86	3.11	3.01	2.92	***3.10***	***3.45***	**Earnings per sh A**	***4.50***
.82	.82	.82	.82	.82	.82	.82	.86	.90	.95	1.00	1.06	1.18	1.32	1.46	1.62	***1.76***	***1.90***	**Div'ds Decl'd per sh B■†**	***2.40***
7.04	8.17	8.50	7.03	8.23	7.49	8.27	7.96	6.79	4.81	4.73	8.29	8.57	7.86	8.53	10.30	***10.40***	***11.20***	**Cap'l Spending per sh**	***12.50***
16.82	17.27	17.91	18.42	19.18	19.10	21.58	22.98	23.49	24.44	25.62	26.66	28.35	30.47	31.95	33.61	***35.40***	***35.70***	**Book Value per sh**	***38.45***
31.71	32.49	33.29	34.23	36.79	39.33	41.77	42.81	44.19	45.09	45.56	45.96	46.15	46.36	46.52	47.38	***48.00***	***49.00***	**Common Shs Outst'g C**	***52.00***
16.0	19.0	19.9	19.2	14.3	20.6	15.9	17.3	20.3	12.2	14.0	15.7	15.0	15.8	17.9	19.4	***Bold figures are Value Line estimates***		**Avg Ann'l P/E Ratio**	***15.0***
1.04	.97	1.09	1.09	.76	1.10	.86	.92	1.22	.81	.89	.98	.95	.89	.94	.98			**Relative P/E Ratio**	***.95***
4.2%	3.8%	3.6%	3.8%	3.5%	3.2%	2.6%	2.6%	3.2%	4.0%	3.2%	2.8%	2.8%	2.7%	2.7%	2.9%			**Avg Ann'l Div'd Yield**	***3.6%***

CAPITAL STRUCTURE as of 6/30/16
Total Debt $1477.4 mill. **Due in 5 Yrs** $525.0 mill.
LT Debt $1427.8 mill. **LT Interest** $72.0 mill.
(Total interest coverage: 4.2x) (46% of Cap'l)
Leases, Uncapitalized Annual rentals $7.0 mill.
Pension Assets-12/15 $780.5 mill.
Oblig. $1117.4 mill.
Pfd Stock None

Common Stock 47,481,930 shs.
as of 7/29/16

MARKET CAP: $3.4 billion (Mid Cap)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		19-21
2024.7	2152.1	2144.7	1893.8	1830.4	1887.2	1927.8	1950.8	2121.7	2463.6	***2500***	***2610***	**Revenues ($mill)**	***3200***
80.5	83.2	61.0	87.5	103.9	112.3	133.3	145.3	141.1	138.3	***150***	***172.5***	**Net Profit ($mill)**	***240***
37.3%	36.5%	40.1%	34.0%	34.7%	36.2%	36.2%	35.0%	35.7%	36.4%	***35.0%***	***35.0%***	**Income Tax Rate**	***35.0%***
4.0%	3.9%	2.8%	4.6%	5.7%	6.0%	6.9%	7.4%	6.7%	5.6%	***6.0%***	***6.6%***	**Net Profit Margin**	***7.5%***
60.6%	58.1%	55.3%	53.5%	49.1%	43.2%	49.2%	49.4%	52.4%	49.3%	***47.0%***	***48.0%***	**Long-Term Debt Ratio**	***48.5%***
39.4%	41.9%	44.7%	46.5%	50.9%	56.8%	50.8%	50.6%	47.6%	50.7%	***53.0%***	***52.0%***	**Common Equity Ratio**	***51.5%***
2287.8	2349.7	2323.3	2371.4	2291.7	2155.9	2576.9	2793.7	3123.9	3143.5	***3200***	***3350***	**Total Capital ($mill)**	***3900***
2668.1	2845.3	2983.3	3034.5	3072.4	3218.9	3343.8	3486.1	3658.4	3891.1	***4050***	***4250***	**Net Plant ($mill)**	***4650***
5.5%	5.5%	4.5%	5.4%	6.1%	6.4%	6.4%	6.3%	5.7%	5.5%	***6.0%***	***6.5%***	**Return on Total Cap'l**	***7.5%***
8.9%	8.5%	5.9%	7.9%	8.9%	9.2%	10.2%	10.3%	9.5%	8.7%	***9.0%***	***10.0%***	**Return on Shr. Equity**	***12.0%***
8.9%	8.5%	5.9%	7.9%	8.9%	9.2%	10.2%	10.3%	9.5%	8.7%	***9.0%***	***10.0%***	**Return on Com Equity**	***12.0%***
5.2%	4.8%	2.1%	4.1%	5.1%	5.3%	6.1%	6.1%	5.0%	4.0%	***4.0%***	***4.5%***	**Retained to Com Eq**	***6.0%***
42%	44%	63%	48%	43%	43%	40%	41%	47%	54%	***56%***	***54%***	**All Div'ds to Net Prof**	***52%***

CURRENT POSITION ($MILL.)	**2014**	**2015**	**6/30/16**
Cash Assets	39.6	36.0	12.1
Other	567.2	522.2	419.7
Current Assets	606.8	558.2	431.8
Accts Payable	168.0	164.9	132.2
Debt Due	24.2	37.5	49.6
Other	277.9	332.6	400.9
Current Liab.	470.1	535.0	582.7
Fix. Chg. Cov.	395%	401%	510%

ANNUAL RATES of change (per sh)	**Past 10 Yrs.**	**Past 5 Yrs.**	**Est'd '13-'15 to '19-'21**
Revenues	1.5%	1.5%	*5.0%*
"Cash Flow"	5.0%	6.5%	*6.5%*
Earnings	8.5%	10.0%	*7.0%*
Dividends	6.0%	9.0%	*8.5%*
Book Value	5.5%	5.5%	*3.0%*

Cal-endar	**QUARTERLY REVENUES ($ mill.) D** Mar.31	Jun.30	Sep.30	Dec.31	**Full Year**
2013	613.5	411.6	387.3	538.4	1950.8
2014	608.4	453.2	432.5	627.7	2121.7
2015	734.2	538.6	505.4	685.4	2463.6
2016	731.2	547.7	***520***	***701.1***	***2500***
2017	***765***	***575***	***545***	***725***	***2610***

Cal-endar	**EARNINGS PER SHARE A D** Mar.31	Jun.30	Sep.30	Dec.31	**Full Year**
2013	1.73	.22	d.06	1.22	3.11
2014	1.51	.21	.04	1.25	3.01
2015	1.53	.10	d.10	1.38	2.92
2016	1.58	.19	***d.05***	***1.38***	***3.10***
2017	***1.68***	***.22***	***.05***	***1.50***	***3.45***

Cal-endar	**QUARTERLY DIVIDENDS PAID B■†** Mar.31	Jun.30	Sep.30	Dec.31	**Full Year**
2012	.265	.295	.295	.295	1.15
2013	.295	.330	.330	.330	1.29
2014	.330	.365	.365	.365	1.43
2015	.365	.405	.405	.405	1.58
2016	.405	.450	.450		

BUSINESS: Southwest Gas Corporation is a regulated gas distributor serving approximately 2.0 million customers in sections of Arizona, Nevada, and California. Comprised of two business segments: natural gas operations and construction services. 2015 margin mix: residential and small commercial, 85%; large commercial and industrial, 4%; transportation, 11%. Total throughput: 2.1 billion therms. Has 5,876 employees. Officers & directors own 1.3% of common stock; BlackRock Inc., 9.6%; The Vanguard Group, Inc., 7.4%; GAMCO Investors, Inc., 6.4% (3/16 Proxy). Chairman: Michael J. Melarkey. Pres. & CEO: John Hester. Inc.: CA. Address: 5241 Spring Mountain Road, Las Vegas, Nevada 89193. Tel.: 702-876-7237. Internet: www.swgas.com.

Shares of Southwest Gas have continued to advance in price over the past three months. We think a fall in bond yields has prompted investors to favor good dividend-paying stocks. Meanwhile, the company reported considerable bottom-line improvement on modest revenue growth for the recent interim. The natural gas utility benefited from rate relief and modest growth in the customer base. Meanwhile, construction services line Centuri continued to grow its existing business and expand into new markets.

Southwest Gas has received approval from regulators to reorganize as a holding company. Subject to consent from various third parties and the final approval from the board, the reorganization could become effective as early as the December quarter. This will provide further separation between the regulated and unregulated businesses, and additional financing flexibility.

The natural gas business should further benefit from several factors. Customer growth, infrastructure tracker mechanisms, and expansion projects will probably continue to support performance. Operations and maintenance expense ought to increase modestly, but this should be offset by lower pension costs. Capital expenditures of about $460 million for 2016 should support system improvements, a larger customer base, and pipeline replacement programs.

Centuri should post good results. This business has a strong base of large utility clients to sustain and grow its operation. Many of these are multiyear pipe replacement programs. Revenue ought to be 7% to 10% higher this year. The long-term fundamentals look sound, given the need to replace aging infrastructure.

This stock is timely. Moreover, we expect healthy growth for the company out to 2019-2021. But this appears to be largely reflected in the recent share price, as the stock is trading well within our Target Price Range. The dividend yield is somewhat below average for a utility, too. But Southwest Gas earns good marks for Price Stability, Growth Persistence, and Earnings Predictability. Still, this equity appears most appropriate for momentum-oriented accounts.

Michael Napoli, CFA *September 2, 2016*

(A) Diluted earnings. Excl. nonrec. gains (losses): '02, (10¢); '05, (11¢); '06, 7¢. Next egs. report due early November. **(B)** Dividends historically paid early March, June, September, and December. ■† Div'd reinvestment and stock purchase plan avail. **(C)** In millions. **(D)** Totals may not sum due to rounding.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	90
Earnings Predictability	80

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WGL HOLDINGS NYSE-WGL

RECENT PRICE	P/E RATIO	(Trailing / Median)	RELATIVE P/E RATIO	DIV'D YLD	
64.09	20.0	(Trailing: 20.9 Median: 15.0)	1.05	3.0%	VALUE LINE

TIMELINESS	2	Raised 8/12/16
SAFETY	1	Raised 4/2/93
TECHNICAL	1	Raised 8/19/16

BETA .75 (1.00 = Market)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
High:	34.8	33.6	35.9	37.1	35.5	40.0	45.0	45.0	47.0	56.8	65.6	74.1
Low:	28.8	27.0	29.8	22.4	28.6	31.0	34.7	36.0	38.0	35.4	50.9	60.0

2019-21 PROJECTIONS

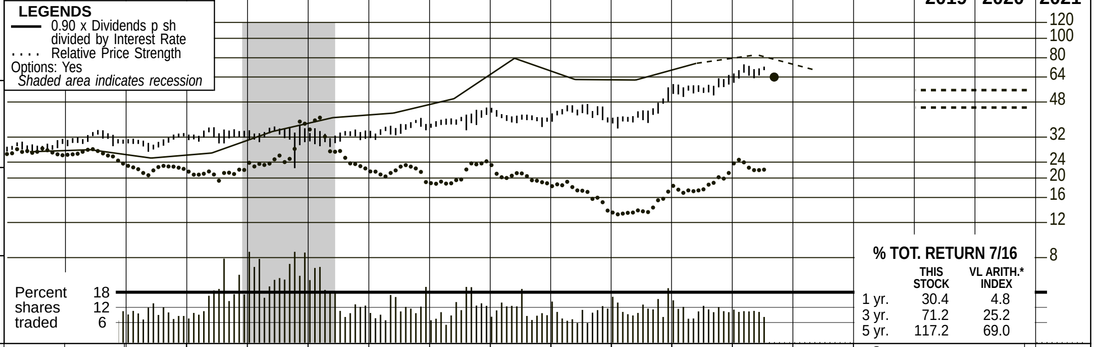
	Price	Gain	Ann'l Total Return
High	55	(-15%)	*Nil*
Low	45	(-30%)	*-4%*

Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	13	0	0	9	0	0	0	0	0
to Sell	1	0	0	0	1	2	0	1	0

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	109	123	126
to Sell	113	106	121
Hld's(000)	32753	33248	34219



% TOT. RETURN 7/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	30.4	4.8
3 yr.	71.2	25.2
5 yr.	117.2	69.0

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
22.19	29.80	32.63	42.45	42.93	44.94	53.96	53.51	52.65	53.98	53.60	53.75	47.07	47.70	53.73	53.43	***46.55***	***51.90***	**Revenues per sh ᴬ**	***53.65***
3.20	3.24	2.63	4.00	3.87	3.97	3.84	3.89	4.34	4.44	4.11	4.01	4.53	4.29	4.80	5.60	***5.50***	***5.70***	**"Cash Flow" per sh**	***6.00***
1.79	1.88	1.14	2.30	1.98	2.13	1.94	2.09	2.44	2.53	2.27	2.25	2.68	2.31	2.68	3.16	***3.10***	***3.30***	**Earnings per sh ᴮ**	***3.30***
1.24	1.26	1.27	1.28	1.30	1.32	1.35	1.37	1.41	1.47	1.50	1.55	1.59	1.66	1.72	1.83	***1.93***	***1.99***	**Div'ds Decl'd per sh ᶜ■**	***2.05***
2.67	2.68	3.34	2.65	2.33	2.32	3.27	3.33	2.70	2.77	2.57	3.94	4.87	6.04	7.63	9.33	***16.35***	***17.30***	**Cap'l Spending per sh**	***19.10***
15.31	16.24	15.78	16.25	16.95	17.80	18.86	19.83	20.99	21.89	22.82	23.49	24.64	24.65	24.08	24.97	***27.00***	***29.00***	**Book Value per sh ᴰ**	***34.60***
46.47	48.54	48.56	48.63	48.67	48.65	48.89	49.45	49.92	50.14	50.54	51.20	51.52	51.70	51.76	49.78	***51.00***	***52.00***	**Common Shs Outst'g ᴱ**	***55.00***
14.6	14.7	23.1	11.1	14.2	14.7	15.5	15.6	13.7	12.6	15.1	17.0	15.3	18.2	15.2	17.0	***Bold figures are Value Line estimates***		**Avg Ann'l P/E Ratio**	***15.0***
.95	.75	1.26	.63	.75	.78	.84	.83	.82	.84	.96	1.07	.97	1.02	.80	.86			**Relative P/E Ratio**	***.95***
4.8%	4.6%	4.8%	5.0%	4.6%	4.2%	4.5%	4.2%	4.2%	4.6%	4.4%	4.1%	3.9%	3.9%	4.2%	3.4%			**Avg Ann'l Div'd Yield**	***4.1%***

CAPITAL STRUCTURE as of 6/30/16
Total Debt $1552.6 mill. **Due in 5 Yrs** $329.3 mill.
LT Debt $1194.3 mill. **LT Interest** $50.5 mill.
(LT interest earned: 6.2x; total interest coverage: 5.7x) (45% of Total Capital)
Pension Assets-9/15 $1,218.7 mill. **Oblig.** $1,218.7 mill.
Preferred Stock $28.2 mill. **Pfd. Div'd** $1.3 mill.

Common Stock 51,059,773 shs. **as of 7/31/16**

MARKET CAP: $3.3 billion (Mid Cap)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		19-21
2637.9	2646.0	2628.2	2706.9	2708.9	2751.5	2425.3	2466.1	2780.9	2659.8	***2375***	***2700***	**Revenues ($mill) ᴬ**	***2950***
96.0	102.9	122.9	128.7	115.0	115.5	138.4	119.7	139.0	158.2	***155***	***170***	**Net Profit ($mill)**	***185***
39.0%	39.1%	37.1%	39.1%	38.7%	42.4%	40.1%	30.2%	29.0%	39.9%	***39.0%***	***39.0%***	**Income Tax Rate**	***39.0%***
3.6%	3.9%	4.7%	4.8%	4.2%	4.2%	5.7%	4.9%	5.0%	5.9%	***6.6%***	***6.1%***	**Net Profit Margin**	***6.2%***
37.8%	37.9%	35.9%	33.3%	33.4%	32.3%	31.2%	28.7%	34.8%	42.6%	***41.5%***	***41.5%***	**Long-Term Debt Ratio**	***43.5%***
60.4%	60.3%	62.4%	65.0%	65.0%	66.2%	67.3%	69.8%	63.8%	56.1%	***57.5%***	***57.0%***	**Common Equity Ratio**	***55.5%***
1526.1	1625.4	1679.5	1687.7	1774.4	1818.1	1886.9	1826.8	1954.0	2215.6	***2405***	***2635***	**Total Capital ($mill)**	***3430***
2067.9	2150.4	2208.3	2269.1	2346.2	2489.9	2667.4	2907.5	3314.4	3672.7	***4070***	***4510***	**Net Plant ($mill)**	***6135***
7.6%	7.6%	8.5%	8.8%	7.6%	7.5%	8.3%	7.5%	8.1%	8.3%	***8.0%***	***7.5%***	**Return on Total Cap'l**	***7.0%***
10.1%	10.2%	11.4%	11.4%	9.7%	9.4%	10.7%	9.2%	10.9%	12.4%	***11.5%***	***11.0%***	**Return on Shr. Equity**	***9.5%***
10.3%	10.4%	11.6%	11.6%	9.9%	9.5%	10.8%	9.3%	11.0%	12.6%	***11.5%***	***11.0%***	**Return on Com Equity**	***9.5%***
3.2%	3.5%	5.0%	5.0%	3.3%	3.4%	4.8%	2.6%	4.3%	5.4%	***4.0%***	***4.5%***	**Retained to Com Eq**	***3.5%***
69%	66%	57%	57%	67%	64%	56%	72%	62%	58%	***63%***	***61%***	**All Div'ds to Net Prof**	***62%***

CURRENT POSITION ($MILL.)	**2014**	**2015**	**6/30/16**
Cash Assets	8.8	6.7	16.5
Other	826.7	774.7	804.1
Current Assets	835.5	781.4	820.6
Accts Payable	313.2	325.1	333.2
Debt Due	473.5	357.0	358.3
Other	233.6	300.8	303.4
Current Liab.	1020.3	982.9	994.9
Fix. Chg. Cov.	535%	535%	535%

ANNUAL RATES of change (per sh)	**Past 10 Yrs.**	**Past 5 Yrs.**	**Est'd '13-'15 to '19-'21**
Revenues	1.5%	-.5%	*0.5%*
"Cash Flow"	2.0%	2.5%	*3.5%*
Earnings	2.5%	2.5%	*3.5%*
Dividends	3.0%	3.5%	*2.5%*
Book Value	4.0%	2.5%	*6.0%*

Fiscal Year Ends	**QUARTERLY REVENUES ($ mill.) ᴬ** Dec.31	Mar.31	Jun.30	Sep.30	**Full Fiscal Year**
2013	686.7	891.4	478.1	409.9	2466.1
2014	680.5	1174.0	467.5	458.9	2780.9
2015	749.2	1001.7	441.2	467.7	2659.8
2016	613.4	835.7	440.6	***485.3***	***2375***
2017	***695***	***915***	***520***	***570***	***2700***

Fiscal Year Ends	**EARNINGS PER SHARE ᴬ ᴮ** Dec.31	Mar.31	Jun.30	Sep.30	**Full Fiscal Year**
2013	1.14	1.75	d.03	d.55	2.31
2014	.99	1.84	.02	d.17	2.68
2015	1.16	2.02	.22	d.23	3.16
2016	1.18	1.78	.33	***d.19***	***3.10***
2017	***1.23***	***1.83***	***.38***	***d.14***	***3.30***

Cal-endar	**QUARTERLY DIVIDENDS PAID ᶜ ■** Mar.31	Jun.30	Sep.30	Dec.31	**Full Year**
2012	.39	.40	.40	.40	1.59
2013	.40	.42	.42	.42	1.66
2014	.42	.44	.44	.44	1.74
2015	.44	.463	.463	.463	
2016	.463	.488	.488		

BUSINESS: WGL Holdings, Inc. is the parent of Washington Gas Light, a natural gas distributor in Washington, D.C. and adjacent areas of VA and MD to resident'l and comm'l users (1,129,865 meters). Hampshire Gas, a federally regulated sub., operates an underground gas-storage facility in WV. Non-regulated subs.: Wash. Gas Energy Svcs. sells and delivers natural gas and provides energy-related products in the D.C. metro area; Wash. Gas Energy Sys. designs/installs comm'l heating, ventilating, and air cond. systems. BlackRock, Inc. owns 8.7% of common stock; Off./dir. less than 1% (1/16 proxy). Chrmn. & CEO: Terry D. McCallister. Inc.: D.C. and VA. Addr.: 101 Const. Ave., N.W., Washington, D.C. 20080. Tel.: 202-624-6410. Internet: www.wglholdings.com.

WGL Holdings logged mixed financial results for the June quarter. Revenues receded modestly. This reflected an almost 2% drop in utility volumes, partially offset by a 1.2% rise in the nonutility business. However, we view the apparent weakness in the regulated utility business as more of a technicality, owing to the year-over-year decline in natural gas prices. On the margin front, operating expenses fell 710 basis points as a percentage of the top line. After accounting for rising earnings from unconsolidated affiliates and reduced interest costs, the bottom line increased 50%, to $0.33 a share. This handily beat our earlier call of $0.21.

Consequently, we have raised our fiscal 2016 and 2017 (ends September 30th) share-net estimates by a dime each, to $3.10 and $3.30, respectively. In the current year, this would still represent a moderate earnings shortfall of almost 2%. The top line is anticipated to decline more than 10% this year due to sustained pressure on natural gas prices as well as a general slowdown in natural gas consumption patterns in WGL's primary service territory. On the upside, the company continues to add new customer accounts. Over the past 12 months, the regulated utility division added about 12,100 active meters. The Commercial Energy Systems and Midstream Energy Services units have been nicely complementary this year. Finally, recently filed rate cases in Virginia and the District of Columbia augur well for recouping costs associated with WGL's infrastructure program.

The Constitution Pipeline has been delayed. Management believes the venture could be in service in the second half of 2018. WGL has a 10% stake in that pipeline. Unfortunately, the decision by the NY State Department of Environmental Conservation to deny the water quality certificate is adding uncertainty here.

The balance sheet is in good shape. Although long-term debt advanced a bit more than 25%, it still represents a pretty standard percentage of total capital for a utility. Finances are solid enough to support the decent dividend.

These shares are timely. But the run-up in price over the past two years places WGL above our Target Price Range.

Bryan J. Fong *September 2, 2016*

(A) Fiscal years end Sept. 30th.
(B) Based on diluted shares. Excludes nonrecurring losses: '01, (13¢); '02, (34¢); '07, (4¢); '08, (14¢) discontinued operations: '06, (15¢). Qtly egs. may not sum to total, due to change in shares outstanding. Next earnings report due late Oct. **(C)** Dividends historically paid early February, May, August, and November. ■ Dividend reinvestment plan available.
(D) Includes deferred charges and intangibles. '15: $705.8 million, $14.18/sh.
(E) In millions.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	55
Earnings Predictability	75

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Table I Liberty Utilities (Midstates)

	(a) Company	(b) Symbol	(c) Price	(d) Annualized Indicated Dividend	(e) Dividend Yield	(f) Growth Rate	(g) DCF
1	Atmos Energy Corporation	ATO	$ 67.13	$ 1.68	2.50%	4.3%	6.8%
2	Spire Inc	SR	$ 61.40	$ 1.96	3.19%	6.0%	9.2%
3	New Jersey Resources Corporation	NJR	$ 33.25	$ 0.96	2.89%	7.0%	9.9%
4	Northwest Natural Gas Company	NWN	$ 51.75	$ 1.87	3.61%	2.5%	6.2%
5	South Jersey Industries, Inc.	SJI	$ 26.38	$ 1.06	4.00%	7.9%	11.9%
6	Southwest Gas	SWX	$ 62.34	$ 1.80	2.89%	7.0%	9.9%
7	WGL Holdings, Inc.	WGL	$ 64.07	$ 1.95	3.05%	3.2%	6.3%
				Arithmetic Average	**3.2%**	**5.4%**	**8.6%**
				Median	**3.0%**	**6.0%**	**9.2%**
				Maximum		**7.9%**	**11.9%**
				Minimum		**2.5%**	**6.2%**

Source:

Closing prices are from Yahoo Finance (9-5-16). Details of the price and dividend yield calculation can be found in my electronic workpapers, Munoz Direct Workpaper, tab "Wkp Price".

Quarterly dividends are from Value Line 2016 3rd Quarter Issue.

Growth rates are based primarily on the data found in this Exhibit in Schedule C, page 2.

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	ATO	**SR**	**NJR**	**NWN**	**SJI**	**SWX**	**WGL**
Five Year Growth Rates							
Earnings per Share	**7.0%**	**-1.0%**	**6.5%**	**-5.0%**	**4.0%**	**10.0%**	**2.5%**
Dividend per Share	**2.5%**	**3.0%**	**7.0%**	**3.0%**	**9.5%**	**9.0%**	**3.5%**
Book Value per Share	**5.0%**	**8.0%**	**6.5%**	**2.5%**	**8.5%**	**5.5%**	**2.5%**
Ten Year Growth Rates							
Earnings per Share	**5.5%**	**3.0%**	**7.5%**	**1.0%**	**7.0%**	**8.5%**	**2.5%**
Dividend per Share	**2.0%**	**2.5%**	**7.0%**	**3.5%**	**9.0%**	**6.0%**	**3.0%**
Book Value per Share	**5.0%**	**7.5%**	**8.0%**	**3.0%**	**8.0%**	**5.5%**	**4.0%**
Median Internal Growth Rates							
Recent Retention Growth	**4.1%**	**11.4%**	**6.7%**	**1.8%**	**9.1%**	**5.8%**	**3.7%**
Ten Year Retention Growth	**3.4%**	**6.5%**	**6.7%**	**2.9%**	**8.2%**	**5.5%**	**4.2%**
Arithmetic Average	**4.3%**	**6.0%**	**7.0%**	**2.5%**	**7.9%**	**7.0%**	**3.2%**
Median	**4.6%**	**6.5%**	**6.9%**	**2.9%**	**8.4%**	**5.9%**	**3.3%**

Growth rates are based primarily on the data found on Value Line Investment Survey, Q1 2016. Internal growth rates are from Schedule C, pages 3 to 9.
Highlighted Values are not included in the average and median calculation.

Table I Atmos Energy Corporation
Financial Data & Calculations

Years	Earnings per Share	Dividends per Share	Average Book Value per Share	Average Return on Common Equity "r"	Dividend Payout Ratio (1-b)	Earnings Retention Ratio "b"	Internal Growth Rate "br"
2007	$1.94	$1.28	$21.09	9.201%	65.979%	34.021%	3.130%
2008	$2.00	$1.30	$22.31	8.967%	65.000%	35.000%	3.660%
2009	$1.97	$1.32	$23.06	8.543%	67.005%	32.995%	2.985%
2010	$2.16	$1.34	$23.84	9.060%	62.037%	37.963%	3.364%
2011	$2.26	$1.36	$24.57	9.198%	60.177%	39.823%	3.288%
2012	$2.10	$1.38	$25.56	8.216%	65.714%	34.286%	2.831%
2013	$2.50	$1.40	$27.31	9.156%	56.000%	44.000%	4.124%
2014	$2.96	$1.48	$29.61	9.998%	50.000%	50.000%	9.092%
2015	$3.09	$1.56	$31.11	9.932%	50.485%	49.515%	9.786%

Recent Five Year Arithmetic Average	**9.3%**	**56.5%**	**43.5%**	**5.8%**
Recent Five Year Median	**9.2%**	**56.0%**	**44.0%**	**4.1%**
Nine Year Arithmetic Average	**9.1%**	**60.3%**	**39.7%**	**4.7%**
Nine Year Median	**9.2%**	**62.0%**	**38.0%**	**3.4%**

Data on earnings, dividends and book value are from Value Line. Other numbers are calculated from these.

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Table I Spire Inc.
Financial Data & Calculations

Years	Earnings per Share	Dividends per Share	Average Book Value per Share	Average Return on Common Equity "r"	Dividend Payout Ratio (1-b)	Earnings Retention Ratio "b"	Internal Growth Rate "br"
2001	$ 1.61	$ 1.34	$15.13	10.645%	83.230%	16.770%	1.785%
2002	$ 1.18	$ 1.34	$15.17	7.781%	113.559%	-13.559%	-1.055%
2003	$ 1.82	$ 1.34	$15.36	11.849%	73.626%	26.374%	3.125%
2004	$ 1.82	$ 1.35	$16.31	11.162%	74.176%	25.824%	2.883%
2005	$ 1.90	$ 1.37	$17.14	11.088%	72.105%	27.895%	7.131%
2006	$ 2.37	$ 1.40	$18.08	13.108%	59.072%	40.928%	6.124%
2007	$ 2.31	$ 1.45	$19.32	11.957%	62.771%	37.229%	5.215%
2008	$ 2.64	$ 1.49	$20.96	12.598%	56.439%	43.561%	7.088%
2009	$ 2.92	$ 1.53	$22.72	12.852%	52.397%	47.603%	6.961%
2010	$ 2.43	$ 1.57	$23.67	10.266%	64.609%	35.391%	3.938%
2011	$ 2.86	$ 1.61	$24.79	11.537%	56.294%	43.706%	5.350%
2012	$ 2.79	$ 1.66	$26.12	10.684%	59.498%	40.502%	4.642%
2013	$ 2.02	$ 1.70	$29.34	6.886%	84.158%	15.842%	11.688%
2014	$ 2.35	$ 1.76	$33.47	7.022%	74.894%	25.106%	19.766%
2015	$ 3.16	$ 1.84	$35.62	8.873%	58.228%	41.772%	11.373%

Recent Five Year Arithmetic Average	**9.0%**	**66.6%**	**33.4%**	**10.6%**
Recent Five Year Median	**8.9%**	**59.5%**	**40.5%**	**11.4%**
Ten Year Arithmetic Average	**10.6%**	**62.8%**	**37.2%**	**8.2%**
Ten Year Median	**11.1%**	**59.3%**	**40.7%**	**6.5%**

Data on earnings, dividends and book value are from Value Line. Other numbers are calculated from these.

Table I New Jersey Resources
Financial Data & Calculations

Years	Earnings per Share	Dividends per Share	Average Book Value per Share	Average Return on Common Equity "r"	Dividend Payout Ratio (1-b)	Earnings Retention Ratio "b"	Internal Growth Rate "br"
2001	0.65	0.39	$4.27	15.222%	60.000%	40.000%	6.089%
2002	0.7	0.4	$4.38	16.000%	57.143%	42.857%	6.857%
2003	0.79	0.41	$4.74	16.667%	51.899%	48.101%	8.017%
2004	0.85	0.43	$5.38	15.814%	50.588%	49.412%	7.814%
2005	0.88	0.45	$5.46	16.117%	51.136%	48.864%	8.866%
2006	0.93	0.48	$6.40	14.531%	51.613%	48.387%	6.731%
2007	0.78	0.51	$7.63	10.230%	65.385%	34.615%	3.970%
2008	1.35	0.56	$8.20	16.473%	41.481%	58.519%	10.386%
2009	1.2	0.62	$8.47	14.176%	51.667%	48.333%	6.818%
2010	1.23	0.68	$8.55	14.386%	55.285%	44.715%	5.082%
2011	1.29	0.72	$9.09	14.199%	55.814%	44.186%	6.024%
2012	1.36	0.77	$9.58	14.196%	56.618%	43.382%	6.714%
2013	1.37	0.81	$10.23	13.399%	59.124%	40.876%	5.766%
2014	2.08	0.86	$11.07	18.798%	41.346%	58.654%	12.014%
2015	1.78	0.93	$12.24	14.548%	52.247%	47.753%	8.591%

	"r"	(1-b)	"b"	"br"
Recent Five Year Arithmetic Average	**15.0%**	**53.0%**	**47.0%**	**7.8%**
Recent Five Year Median	**14.2%**	**55.8%**	**44.2%**	**6.7%**
Ten Year Arithmetic Average	**14.5%**	**53.1%**	**46.9%**	**7.2%**
Ten Year Median	**14.3%**	**53.8%**	**46.2%**	**6.7%**

Data on earnings, dividends and book value are from Value Line. Other numbers are calculated from these.

Table I Northwest Natural Gas
Financial Data & Calculations

Years	Earnings per Share	Dividends per Share	Average Book Value per Share	Average Return on Common Equity "r"	Dividend Payout Ratio (1-b)	Earnings Retention Ratio "b"	Internal Growth Rate "br"
2001	$ 1.88	$ 1.25	$18.25	10.304%	66.489%	33.511%	3.453%
2002	$ 1.62	$ 1.26	$18.72	8.654%	77.778%	22.222%	1.210%
2003	$ 1.76	$ 1.27	$19.20	9.167%	72.159%	27.841%	1.155%
2004	$ 1.86	$ 1.30	$20.08	9.263%	69.892%	30.108%	-1.015%
2005	$ 2.11	$ 1.32	$20.96	10.067%	62.559%	37.441%	5.969%
2006	$ 2.35	$ 1.39	$21.65	10.857%	59.149%	40.851%	4.004%
2007	$ 2.76	$ 1.44	$22.27	12.396%	52.174%	47.826%	3.625%
2008	$ 2.57	$ 1.52	$23.12	11.118%	59.144%	40.856%	3.150%
2009	$ 2.83	$ 1.60	$24.30	11.648%	56.537%	43.463%	5.229%
2010	$ 2.73	$ 1.68	$25.48	10.714%	61.538%	38.462%	4.242%
2011	$ 2.39	$ 1.75	$26.39	9.056%	73.222%	26.778%	2.719%
2012	$ 2.22	$ 1.79	$26.97	8.233%	80.631%	19.369%	2.042%
2013	$ 2.24	$ 1.83	$27.50	8.145%	81.696%	18.304%	1.833%
2014	$ 2.16	$ 1.85	$27.95	7.729%	85.648%	14.352%	1.548%
2015	$ 1.96	$ 1.86	$28.30	6.927%	94.898%	5.102%	0.782%
Recent Five Year Arithmetic Average				**8.0%**	**83.2%**	**16.8%**	**1.8%**
Recent Five Year Median				**8.1%**	**81.7%**	**18.3%**	**1.8%**
Ten Year Arithmetic Average				**9.7%**	**70.5%**	**29.5%**	**2.9%**
Ten Year Median				**9.9%**	**67.4%**	**32.6%**	**2.9%**

Data on earnings, dividends and book value are from Value Line. Other numbers are calculated from these.

Table I **South Jersey Industries, Inc.**
Financial Data & Calculations

Years	Earnings per Share	Dividends per Share	Average Book Value per Share	Average Return on Common Equity "r"	Dividend Payout Ratio (1-b)	Earnings Retention Ratio "b"	Internal Growth Rate "br"
2001	$0.57	$0.37	$3.77	15.139%	64.912%	35.088%	5.312%
2002	$0.61	$0.38	$4.38	13.943%	62.295%	37.705%	2.228%
2003	$0.68	$0.39	$5.24	12.989%	57.353%	42.647%	-0.153%
2004	$0.79	$0.41	$5.92	13.356%	51.899%	48.101%	-0.151%
2005	$0.86	$0.43	$6.48	13.282%	50.000%	50.000%	12.294%
2006	$1.23	$0.46	$7.15	17.203%	37.398%	62.602%	13.778%
2007	$1.05	$0.51	$7.84	13.401%	48.571%	51.429%	8.308%
2008	$1.14	$0.56	$8.40	13.580%	49.123%	50.877%	7.568%
2009	$1.19	$0.61	$8.90	13.378%	51.261%	48.739%	6.847%
2010	$1.35	$0.68	$9.33	14.469%	50.370%	49.630%	7.534%
2011	$1.45	$0.75	$9.94	14.595%	51.724%	48.276%	8.127%
2012	$1.52	$0.83	$10.98	13.843%	54.605%	45.395%	10.323%
2013	$1.52	$0.90	$12.14	12.526%	59.211%	40.789%	10.459%
2014	$1.57	$0.96	$13.15	11.944%	61.146%	38.854%	9.121%
2015	$1.44	$1.02	$14.14	10.187%	70.833%	29.167%	6.389%
	Recent Five Year Arithmetic Average			**12.6%**	**59.5%**	**40.5%**	**8.9%**
	Recent Five Year Median			**12.5%**	**59.2%**	**40.8%**	**9.1%**
	Ten Year Arithmetic Average			**13.5%**	**53.4%**	**46.6%**	**8.8%**
	Ten Year Median			**13.5%**	**51.5%**	**48.5%**	**8.2%**

Data on earnings, dividends and book value are from Value Line. Other numbers are calculated from these.

Table I Southwest Gas
Financial Data & Calculations

Years	Earnings per Share	Dividends per Share	Average Book Value per Share	Average Return on Common Equity "r"	Dividend Payout Ratio (1-b)	Earnings Retention Ratio "b"	Internal Growth Rate "br"
2001	$ 1.15	$ 0.82	$17.05	6.747%	71.304%	28.696%	1.936%
2002	$ 1.16	$ 0.82	$17.59	6.595%	70.690%	29.310%	-0.712%
2003	$ 1.13	$ 0.82	$18.17	6.221%	72.566%	27.434%	-3.477%
2004	$ 1.66	$ 0.82	$18.80	8.830%	49.398%	50.602%	6.967%
2005	$ 1.25	$ 0.82	$19.14	6.531%	65.600%	34.400%	6.222%
2006	$ 1.98	$ 0.82	$20.34	9.735%	41.414%	58.586%	7.806%
2007	$ 1.95	$ 0.86	$22.28	8.752%	44.103%	55.897%	5.381%
2008	$ 1.39	$ 0.90	$23.24	5.982%	64.748%	35.252%	2.036%
2009	$ 1.94	$ 0.95	$23.97	8.095%	48.969%	51.031%	4.546%
2010	$ 2.27	$ 1.00	$25.03	9.069%	44.053%	55.947%	5.497%
2011	$ 2.43	$ 1.06	$26.14	9.296%	43.621%	56.379%	5.594%
2012	$ 2.86	$ 1.18	$27.51	10.398%	41.259%	58.741%	6.397%
2013	$ 3.11	$ 1.32	$29.41	10.575%	42.444%	57.556%	6.400%
2014	$ 3.01	$ 1.46	$31.21	9.644%	48.505%	51.495%	5.781%
2015	$ 2.92	$ 1.62	$32.78	8.908%	55.479%	44.521%	3.966%
Recent Five Year Arithmetic Average				**9.8%**	**46.3%**	**53.7%**	**5.6%**
Recent Five Year Median				**9.6%**	**43.6%**	**56.4%**	**5.8%**
Ten Year Arithmetic Average				**9.0%**	**47.5%**	**52.5%**	**5.3%**
Ten Year Median				**9.2%**	**44.1%**	**55.9%**	**5.5%**

Data on earnings, dividends and book value are from Value Line. Other numbers are calculated from these.

Table I WGL Holdings, Inc.
Financial Data & Calculations

Years	Earnings per Share	Dividends per Share	Average Book Value per Share	Average Return on Common Equity "r"	Dividend Payout Ratio (1-b)	Earnings Retention Ratio "b"	Internal Growth Rate "br"
2001	$ 1.88	$ 1.26	$15.78	11.918%	67.021%	32.979%	3.930%
2002	$ 1.14	$ 1.27	$16.01	7.121%	111.404%	-11.404%	-0.905%
2003	$ 2.30	$ 1.28	$16.02	14.362%	55.652%	44.348%	6.256%
2004	$ 1.98	$ 1.30	$16.60	11.928%	65.657%	34.343%	4.113%
2005	$ 2.13	$ 1.32	$17.38	12.259%	61.972%	38.028%	4.809%
2006	$ 1.94	$ 1.35	$18.33	10.584%	69.588%	30.412%	3.791%
2007	$ 2.09	$ 1.37	$19.35	10.804%	65.550%	34.450%	4.201%
2008	$ 2.44	$ 1.41	$20.41	11.955%	57.787%	42.213%	5.390%
2009	$ 2.53	$ 1.47	$21.44	11.800%	58.103%	41.897%	5.308%
2010	$ 2.27	$ 1.50	$22.36	10.154%	66.079%	33.921%	4.204%
2011	$ 2.25	$ 1.55	$23.16	9.717%	68.889%	31.111%	3.681%
2012	$ 2.68	$ 1.59	$24.07	11.137%	59.328%	40.672%	4.882%
2013	$ 2.31	$ 1.66	$24.65	9.373%	71.861%	28.139%	2.845%
2014	$ 2.68	$ 1.72	$24.37	10.999%	64.179%	35.821%	1.388%
2015	$ 3.16	$ 1.83	$24.53	12.885%	57.911%	42.089%	5.423%
Recent Five Year Arithmetic Average				**10.8%**	**64.4%**	**35.6%**	**3.6%**
Recent Five Year Median				**11.0%**	**64.2%**	**35.8%**	**3.7%**
Ten Year Arithmetic Average				**10.9%**	**63.9%**	**36.1%**	**4.1%**
Ten Year Median				**10.9%**	**64.9%**	**35.1%**	**4.2%**

Data on earnings, dividends and book value are from Value Line. Other numbers are calculated from these.

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CAPM Cost of Common Equity

Table I Risk-free Interest Rate and Estimated Risk Premium

Morningstar's Estimated Geometric Long-run Market Return	10.00%
Morningstar's Estimated Risk-free Interest Rate on 20-year Treasury Bond	5.60%
Estimated Risk Premium	4.40%

Table II OCA Utilities' Adjusted Betas

			Betas
1	Atmos Energy Corporation	ATO	0.75
2	Spire Inc	SR	0.70
3	New Jersey Resources Corporation	NJR	0.80
4	Northwest Natural Gas Company	NWN	0.65
5	South Jersey Industries, Inc.	SJI	0.80
6	Southwest Gas	SWX	0.75
7	WGL Holdings, Inc.	WGL	0.75
8	Utility Sample Arithmetic Average		0.74
9	Utility Sample Median		0.75
10	Utility Sample Minimum		0.65
11	Utility Sample Maximum		0.80

Table III Sample Utilities' CAPM Cost of Common Equity

12	Atmos Energy Corporation	ATO	8.9%
13	Spire Inc	SR	8.7%
14	New Jersey Resources Corporation	NJR	9.1%
15	Northwest Natural Gas Company	NWN	8.5%
16	South Jersey Industries, Inc.	SJI	9.1%
17	Southwest Gas	SWX	8.9%
18	WGL Holdings, Inc.	WGL	8.9%
19	Utility Sample Arithmetic Average		8.9%
20	Utility Sample Median		8.9%
21	Utility Sample Minimum		8.5%
22	Utility Sample Maximum		9.1%

Analysis: The CAPM cost of common equity (K) is equal to the risk free interest rate (I) plus the product of the market risk premium (RP) multiplied by beta (b). The equation is $(I) + b * (RP) = k$.

Sources: Betas are from Value Line Investment Surveys included in Schedule B. The long-run stock market return and 20-year Treasury bond yield are from Morningstar's 2015 Yearbook (Ibbotson SBBI 2015 Classic Yearbook, Morningstar, p. 40).

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Morningstar's Estimated Risk Premium, Volatility and Declining Risk Premiums

Table I			Discrete Common Stock Annual Return	Discrete US Treasury Bill Annual Return	Realized Discrete Risk Premium
		Col.	a	b	c
			Overall Period	**1926 -2015**	
1	Average Returns		**12.2%**	**3.5%**	**8.7%**
2	Standard Deviation		**20.1%**	**3.2%**	**20.5%**
3	Maximum		**53.9%**	**14.7%**	**53.5%**
4	Minimum		**-43.3%**	**0.0%**	**-44.4%**
Table II			**More Distant Past Period**	**1926 - 1968**	
5	Average Returns		**13.3%**	**1.8%**	**11.4%**
6	Standard Deviation		**23.0%**	**1.9%**	**23.3%**
7	Maximum		**53.9%**	**7.7%**	**53.5%**
8	Minimum		**-43.3%**	**0.0%**	**-44.4%**
Table III			**More Recent Period**	**1969 - 2015**	
9	Average Returns		**11.3%**	**5.0%**	**6.3%**
10	Standard Deviation		**17.4%**	**3.4%**	**17.5%**
11	Maximum		**37.4%**	**14.7%**	**32.4%**
12	Minimum		**-36.9%**	**0.0%**	**-38.5%**
Table IV			**Comparison of Returns and Risk Premiums**		
13	**More Distant Past Period**	**1926 - 1968**	**13.3%**	1.8%	**11.4%**
14	**More Recent Period**	**1969 - 2015**	**11.3%**	5.0%	**6.3%**

Analysis: Table I depicts the overall data on returns and risk premiums. Table II depicts older data and Table III depicts more recent data on returns and risk premiums. Table IV compares the older period to the more recent period. Note in Table IV (Col. c, Row 13 compared to Row 14) how risk premiums have declined. The more recent period's risk premium is considerably smaller than the more distant past.

According to Morningstar's estimates, stock returns have declined (Col. a, Row 13 compared to Row 14), stocks have become less risky (Col. a, Row 6 compared Row 10), government bill returns have increased (Col. b, Row 5 compared to 9), and government bills have become more risky (Col. b, Row 6 compared to 10).

Since returns depend on risks and the stock market is now less risky and the Treasury bond market is now more risky, the expected return on stocks has decreased and the expected return on bonds has increased to reflect these risks. Because the risk premium is the difference between the expected returns of stocks and Treasury securities, risk premiums, as a mathematical necessity must decrease.

Notes: The standard deviation is an indicator of volatility and risk. The higher the risks, the higher the expected return on that asset. The risk premium is the difference between the return on stocks and the return on U. S. Treasury securities. Differences are due to rounding.

Source: Ibbotson SBBI 2015 Yearbook, Duff & Phelps, Appendix Tables B-1, B-5 and B-9.

Morningstar's Risk Premium, Volatility and Declining Risk Premiums 1925 to 2012

Column/Row	Year A	Common Stock Return Index For Year Ended B	Discrete Common Stock Annual Return C	Long-term T-Bond Total Return Index For Year Ended D	Discrete Long-term T-Bond Annual Return E	Long-term T-Bond Realized Discrete Risk Premium F	T-Bill Total Return Index For Year Ended G	Discrete T-Bill Annual Return H	T-Bill Realized Discrete Risk Premium I
1	1925	1		1			1		
2	1926	1.116	11.600%	1.078	7.800%	3.800%	1.033	3.300%	8.300%
3	1927	1.535	37.545%	1.174	8.905%	28.639%	1.065	3.098%	34.447%
4	1928	2.204	43.583%	1.175	0.085%	43.498%	1.103	3.568%	40.015%
5	1929	2.018	-8.439%	1.215	3.404%	-11.843%	1.155	4.714%	-13.154%
6	1930	1.516	-24.876%	1.272	4.691%	-29.567%	1.183	2.424%	-27.300%
7	1931	0.859	-43.338%	1.204	-5.346%	-37.992%	1.196	1.099%	-44.437%
8	1932	0.789	-8.149%	1.407	16.860%	-25.009%	1.207	0.920%	-9.069%
9	1933	1.214	53.866%	1.406	-0.071%	53.937%	1.211	0.331%	53.534%
10	1934	1.197	-1.400%	1.547	10.028%	-11.429%	1.213	0.165%	-1.565%
11	1935	1.767	47.619%	1.624	4.977%	42.642%	1.215	0.165%	47.454%
12	1936	2.367	33.956%	1.746	7.512%	26.444%	1.217	0.165%	33.791%
13	1937	1.538	-35.023%	1.75	0.229%	-35.252%	1.221	0.329%	-35.352%
14	1938	2.016	31.079%	1.847	5.543%	25.536%	1.221	0.000%	31.079%
15	1939	2.008	-0.397%	1.957	5.956%	-6.352%	1.221	0.000%	-0.397%
16	1940	1.812	-9.761%	2.076	6.081%	-15.842%	1.221	0.000%	-9.761%
17	1941	1.602	-11.589%	2.096	0.963%	-12.553%	1.222	0.082%	-11.671%
18	1942	1.927	20.287%	2.163	3.197%	17.091%	1.225	0.245%	20.042%
19	1943	2.427	25.947%	2.208	2.080%	23.867%	1.229	0.327%	25.621%
20	1944	2.906	19.736%	2.27	2.808%	16.928%	1.233	0.325%	19.411%
21	1945	3.965	36.442%	2.514	10.749%	25.693%	1.237	0.324%	36.117%
22	1946	3.645	-8.071%	2.511	-0.119%	-7.951%	1.242	0.404%	-8.475%
23	1947	3.853	5.706%	2.445	-2.628%	8.335%	1.248	0.483%	5.223%
24	1948	4.065	5.502%	2.529	3.436%	2.067%	1.258	0.801%	4.701%
25	1949	4.829	18.795%	2.692	6.445%	12.349%	1.272	1.113%	17.682%
26	1950	6.36	31.704%	2.693	0.037%	31.667%	1.287	1.179%	30.525%
27	1951	7.888	24.025%	2.587	-3.936%	27.961%	1.306	1.476%	22.549%
28	1952	9.336	18.357%	2.617	1.160%	17.197%	1.328	1.685%	16.672%
29	1954	14.108	51.114%	2.617	0.000%	51.114%	1.328	0.000%	51.114%
30	1955	18.561	31.564%	2.87	9.668%	21.896%	1.385	4.292%	27.271%
31	1956	19.778	6.557%	2.71	-5.575%	12.132%	1.419	2.455%	4.102%
32	1957	17.646	-10.780%	2.912	7.454%	-18.234%	1.464	3.171%	-13.951%
33	1958	25.298	43.364%	2.734	-6.113%	49.477%	1.486	1.503%	41.861%
34	1959	28.322	11.954%	2.673	-2.231%	14.185%	1.53	2.961%	8.993%
35	1961	36.106	27.484%	2.673	0.000%	27.484%	1.53	0.000%	27.484%
36	1962	32.955	-8.727%	3.282	22.783%	-31.510%	1.648	7.712%	-16.439%
37	1963	40.468	22.798%	3.322	1.219%	21.579%	1.7	3.155%	19.642%
38	1964	47.139	16.485%	3.438	3.492%	12.993%	1.76	3.529%	12.955%
39	1965	53.008	12.450%	3.462	0.698%	11.752%	1.829	3.920%	8.530%
40	1966	47.674	-10.063%	3.589	3.668%	-13.731%	1.916	4.757%	-14.819%
41	1967	59.104	23.975%	3.259	-9.195%	33.170%	1.997	4.228%	19.748%
42	1968	65.641	11.060%	3.251	-0.245%	11.306%	2.101	5.208%	5.852%
43	1969	60.059	-8.504%	3.086	-5.075%	-3.428%	2.239	6.568%	-15.072%
44	1970	62.465	4.006%	3.46	12.119%	-8.113%	2.385	6.521%	-2.515%
45	1971	71.406	14.314%	3.917	13.208%	1.106%	2.49	4.403%	9.911%
46	1972	84.956	18.976%	4.14	5.693%	13.283%	2.585	3.815%	15.161%
47	1973	72.5	-14.662%	4.094	-1.111%	-13.551%	2.764	6.925%	-21.586%
48	1974	53.311	-26.468%	4.272	4.348%	-30.815%	2.986	8.032%	-34.499%
49	1975	73.144	37.202%	4.665	9.199%	28.003%	3.159	5.794%	31.409%
50	1976	90.584	23.843%	5.447	16.763%	7.080%	3.319	5.065%	18.778%
51	1977	84.076	-7.184%	5.41	-0.679%	-6.505%	3.489	5.122%	-12.307%
52	1978	89.592	6.561%	5.346	-1.183%	7.744%	3.74	7.194%	-0.633%
53	1979	106.112	18.439%	5.28	-1.235%	19.674%	4.128	10.374%	8.065%
54	1980	140.513	32.420%	5.071	-3.958%	36.378%	4.592	11.240%	21.179%
55	1981	133.615	-4.909%	5.166	1.873%	-6.783%	5.267	14.699%	-19.609%
56	1982	162.221	21.409%	7.251	40.360%	-18.951%	5.822	10.537%	10.872%
57	1983	198.743	22.514%	7.298	0.648%	21.866%	6.335	8.811%	13.702%
58	1984	211.197	6.266%	8.427	15.470%	-9.204%	6.959	9.850%	-3.584%
59	1985	279.114	32.158%	11.037	30.972%	1.186%	7.496	7.717%	24.442%
60	1986	330.668	18.471%	13.745	24.536%	-6.065%	7.958	6.163%	12.307%
61	1987	347.965	5.231%	13.372	-2.714%	7.945%	8.393	5.466%	-0.235%
62	1988	406.455	16.809%	14.665	9.669%	7.140%	8.926	6.351%	10.459%
63	1989	534.456	31.492%	17.322	18.118%	13.374%	9.673	8.369%	23.123%
64	1990	517.499	-3.173%	18.392	6.177%	-9.350%	10.429	7.816%	-10.988%
65	1991	675.592	30.549%	21.942	19.302%	11.248%	11.012	5.590%	24.959%
66	1992	727.412	7.670%	23.709	8.053%	-0.383%	11.398	3.505%	4.165%
67	1993	800.078	9.990%	28.034	18.242%	-8.252%	11.728	2.895%	7.094%
68	1994	810.538	1.307%	25.856	-7.769%	9.077%	12.186	3.905%	-2.598%
69	1995	1113.918	37.429%	34.044	31.668%	5.762%	12.868	5.597%	31.833%
70	1996	1370.946	23.074%	33.727	-0.931%	24.005%	13.538	5.207%	17.868%
71	1997	1828.326	33.362%	39.074	15.854%	17.509%	14.25	5.259%	28.103%
72	1998	2350.892	28.582%	44.178	13.062%	15.519%	14.942	4.856%	23.726%
73	1999	2845.629	21.045%	40.218	-8.964%	30.008%	15.641	4.678%	16.367%
74	2000	2586.524	-9.105%	48.856	21.478%	-30.583%	16.563	5.895%	-15.000%
75	2001	2279.127	-11.885%	50.662	3.697%	-15.581%	17.197	3.828%	-15.712%
76	2002	1775.341	-22.104%	59.699	17.838%	-39.942%	17.48	1.646%	-23.750%
77	2003	2284.785	28.696%	60.564	1.449%	27.247%	17.659	1.024%	27.672%
78	2004	2533.204	10.873%	65.717	8.508%	2.364%	17.871	1.201%	9.672%
79	2005	2657.559	4.909%	70.852	7.814%	-2.905%	18.043	0.962%	3.947%
80	2006	3077.329	15.795%	71.694	1.188%	14.607%	19.287	6.895%	8.901%
81	2007	3246.391	5.494%	78.779	9.882%	-4.388%	20.186	4.661%	0.833%
82	2008	2049.448	-36.870%	99.161	25.872%	-62.742%	20.509	1.600%	-38.470%
83	2009	2591.824	26.464%	84.383	-14.903%	41.368%	20.529	0.098%	26.367%
84	2010	2982.24	15.063%	92.942	10.143%	4.920%	20.553	0.117%	14.946%
85	2011	3045.218	2.112%	119.183	28.234%	-26.122%	20.562	0.044%	2.068%
86	2012	3532.562	16.004%	123.125	3.308%	12.696%	20.574	0.058%	15.945%
87	2013	4676.682	32.388%	109.138	-11.360%	43.748%	20.579	0.024%	32.364%
88	2014	5316.85	13.689%	135.185	23.866%	-10.178%	20.583	0.019%	13.669%
89	2015	5390.425	1.384%	132.321	-2.119%	3.502%	20.586	0.015%	1.369%

Source: Ibbotson SBBI 2015 Yearbook, Duff & Phelps, Appendix Tables B-1, B-5 and B-9.

	Overall Period 1926 - 2015					
89	Average	12.217%	6.171%	6.045%	3.546%	8.671%
90	Standard Deviation	20.094%	10.196%	22.717%	3.228%	20.479%
91	Maximum	53.866%	40.360%	53.937%	14.699%	53.534%
92	Minimum	-43.338%	-14.903%	-62.742%	0.000%	-44.437%
	More Distant Past Period 1926 - 1968					
93	Average	**13.267%**	**3.085%**	**10.182%**	**1.844%**	**11.423%**
94	Standard Deviation	23.010%	6.023%	24.391%	1.895%	23.335%
95	Maximum	53.866%	22.783%	53.937%	7.712%	53.534%
96	Minimum	-43.338%	-9.195%	-37.992%	0.000%	-44.437%
	More Recent Period 1969 - 2015					
97	Average	**11.301%**	**8.864%**	**2.436%**	**5.030%**	**6.271%**
98	Standard Deviation	17.361%	12.214%	20.739%	3.429%	17.524%
99	Maximum	37.429%	40.360%	43.748%	14.699%	32.364%
100	Minimum	-36.870%	-14.903%	-62.742%	0.015%	-38.470%

Source: Ibbotson SBBI 2015 Yearbook, Duff & Phelps, Appendix Tables B-1, B-5 and B-9.

OFFICE OF CONSUMER ADVOCATE
DATA REQUEST

DATE	:	September 16, 2016
DOCKET NO.	:	RPU-2016-0003
COMPANY	:	Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities
WITNESS	:	Keith Magee (with information provided by John Peellegoda)
SUBJECT	:	Capital Structure
REFERENCE	:	Liberty Utilities' Responses to OCA Data Request Nos. 2–7.

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17. Please explain how Liberty Utilities obtained the long-term debt and common equity that is included in Liberty's response to OCA Data Request Nos. 2–7. As part of the explanation, identify whether or not Liberty Utilities obtains capital directly from the market. If Liberty Utilities does not obtain capital directly from the market, please respond to the following:

A. How is Liberty Utilities' actual capital structure determined? Is it based on target ratios, hypothetical ratios, or assigned ratios?

B. Provide copies of all documentation which sets forth the process by which Liberty Utilities obtains capital, and/or is allocated or assigned capital from LuCo.

C. Provide a narrative explanation of the affiliate relationship between LuCo and Liberty Utilities, including the services LuCo provides to Liberty Utilities and any charges billed to Liberty Utilities.

Response: The utility, Liberty Utilities (Midstates Natural Gas) Corp. does not obtain capital directly from the market. Liberty Utilities obtains long term debt through its financing affiliate, Liberty Utilities Co. ("LUCo"); and its equity is ultimately sourced through its publicly traded parent, Algonquin Power & Utilities Corp. ("APUC").

A. Liberty Utilities parent company, LUCo, targets an investment grade capital structure.

B. Liberty Utilities, the utility, does not have any documents responsive to this request, however, its parent company, LUCo, targets an investment grade capital structure.

C. Liberty Utilities Co. ("LUCo") is the immediate parent company of Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities. LUCo provides financing for Liberty Utilities, including guarantees, short-term loans, and long-term capital debt financing on terms and conditions that the parties memorialize in written agreement(s). In 2015, charges approximated $161,000.

Information for this response was provided by John Pellegoda, Senior Manager of Treasury.

NOTE: In the event the response to this data request contains confidential information, do not simply mark the entire response or attached document(s) confidential. Please highlight, or otherwise identify, the specific information that is claimed to be confidential.